

ESSAYS
OF A
BIRMINGHAM MANUFACTURER.

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"Apology for Sinking Funds,"
&c., &c.

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Essay I.

INJUSTICE IN JUSTICE.

I.

THE English have long valued themselves on their administration of justice: trial by jury throughout their history, and the habeas-corpus acts nearly perfected two centuries ago, have placed them on a height from which they could look down with contempt on French and German political slavery. The groans of the victims of the Inquisition were made familiar by Corporal Trim, in the sermon borrowed, as we are told, from the great scholar, Bentley: and so far were the English from exaggerating foreign judicial iniquities, that they overlooked the fact of the ordinary criminal procedure being that of the Inquisition,⁽¹⁾ with its secrecy and its prolonged tortures: an ignorance as unfair to the Inquisition as unduly favourable to the lay courts. Everyone however, did know that these courts inflicted torture on suspected persons before trial, and that thus the innocent as well as the guilty were victims of judicial cruelty.

Another topic of invective was the use of *lettres-de-cachet*; warrants often obtained by court favour; and as to which Blackstone says, that during the mild administration of Cardinal Fleury, 54,000 were issued upon proceedings growing out of the Bull *Unigenitus*.^(1a) There was perhaps no substantial injustice in locking up at Vincennes the debauched and stormy Mirabeau; who after all allowances are made for slanders by his enemies, and after all the palliations offered by the virtuous Romilly,⁽²⁾ must be pronounced a genius dangerous in peaceable times to his family and to society. The "tiger scarred with the small pox" was an antagonist of the human race. He was another Achitophel:⁽³⁾

A fiery soul, which working out its way,
Fretted the pigmy body to decay,
And o'er-inform'd the tenement of clay.
A daring pilot in extremity;
Pleas'd with the danger, when the waves went high
He sought the storms; but for a calm unfit,
Would steer too nigh the sands to boast his wit.
Great wits are sure to madness near allied,
And thin partitions do their bounds divide.

But whatever we may think of Mirabeau's treatment, our blood boils when we read of that which was suffered by a great wit, who had dropped his paternal peasant-name Arouet, and had adopted the name of Voltaire; not as Mr. Carlyle would have us believe by making an anagram of *Arouet le jeune*, but as the French sporting paper, *Le Derby*, is alleged to have proved,⁽⁴⁾ from a maternal ancestor. Thus was he treated:⁽⁵⁾

"It was in 1725 that Voltaire was cudgelled by the Chevalier de Rohan's servants. His glory was already established; and ill

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satisfied no doubt with the name of Arouet, which he took from his father, he had chosen another better fitted for the mouth of fame."

Oh, Amos Cottle! Phœbus! what a name⁽⁶⁾
To fill the speaking trump of future fame!

"This circumstance had irritated the Chevalier de Rohan; and meeting the author of the *Henriade* at the Opera, he said: 'Pray what do you really call yourself? Is it Mons Arouet or Mons de Voltaire?—Monsieur le Chevalier, it is better to make oneself a name than to trail the name one has received.' We know how the chevalier avenged this repartee. One day Voltaire was dining with the Duc de Sully, and he was told that a carriage awaited him at the door. He immediately went down, and was seized and thrashed by the servants. The chevalier from his carriage encouraged his people. Hit him, hit him; but spare his head, for something good may come from it yet. We see that the chevalier had some humour: he had also the ear of ministers, and that of the *lieutenant-criminel*: so that Voltaire for commencing proceedings against his enemy, was first locked up in the Bastille, and then banished across the straits."

"England was already a free country, where the citizens managed their own affairs; and where their dignity was inviolably guaranteed by the laws." No wonder that these free English regarded with some contempt a people who not only ate frogs and wore wooden shoes, but who permitted the use of a *lettre-de-cachet*, to shield a noble from punishment which he had deserved for a brutal violation of justice.

Add that the prisoner might be ignorant of the charge on which he was arrested, and had no means of demanding to be brought to trial, and you have abundant justification of the English claim to superiority: you will realize too, how the fall of the Bastille (the typical fortress of injustice), was accompanied with the mad joy which inaugurated a blood-stained revolution.

Tried then, by the low European standard, our

constitutional liberties might be pronounced admirable, and worthy of the encomiums of De Lolme and Blackstone: the rights of our fathers to know the cause of arrest, to claim a speedy trial, to have their case submitted to a jury, to enjoy the fullest publicity in the court, explain the encomiums on England as compared with France.

It was therefore with angry surprise that men read in 1776, the *Fragment on Government*, printed anonymously,⁽⁷⁾ and soon known by a father's proud indiscretion, to have been written by an obscure barrister. It seemed inexcusable and monstrous that a young man should have opposed himself to the Constitutionalists and to Blackstone; and that he should threaten to give a *Comment on the Commentaries*.⁽⁸⁾

"In the mean time, that I may stand more fully justified, or excused at least, in an enterprise to most perhaps so extraordinary, and to many doubtless so unacceptable, it may be of use to endeavour to state with some degree of precision, the grounds of that war which, for the interests of true science, and of liberal improvement, I think myself bound to wage against this work."

The man of less than thirty who wrote this, had before him half a century of comparative unimportance. But for Earl Shelburne (afterwards Marquis of Lansdowne), he might perhaps have fallen into a permanently morbid or even melancholy habit of mind, caused by the neglect he suffered. "He raised me from the bottomless pit of humiliation: he made me feel I was something."⁽⁹⁾ But Bentham gradually formed a school, the teaching and efforts of which have during forty years past, regenerated (as I think) the policy and the institutions of England: sweeping away accumulated

abuses, and adapting our government to the requirements of our improved political intelligence.

Among the practices abhorrent to our present gentleness, were the administration of prisons, and the severe sentences on convicts. As to the first, the unwearied self-devotion of Howard had opened the eyes of men: he had shown us that we had no claim to superiority over the rest of the world; nay, that in some instances absolute governments had done more for right and decency than we had.

At a much later date, Sydney Smith thus pleasantly described some abuses.⁽¹⁰⁾

“There are, in every county in England, large public schools, maintained at the expense of the county, for the encouragement of profligacy and vice, and for providing a proper succession of house-breakers, profligates, and thieves. They are schools, too, conducted without the smallest degree of partiality or favour; there being no man (however mean his birth, or obscure his situation) who may not easily procure admission to them. The moment any young person evinces the slightest propensity for these pursuits, he is provided with food, clothing, and lodging, and put to his studies under the most accomplished thieves and cut-throats the county can supply. There is not, to be sure, a formal arrangement of lectures after the manner of our Universities; but the petty-larcenous stripling, being left destitute of every species of employment, and locked up with accomplished villains as idle as himself, listens to their pleasant narration of successful crimes, and pants for the hour of freedom, that he may begin the same bold and interesting career.”

But how small a part of the evils is here described! Let us see what Mr. M. D. Hill, as Recorder of Birmingham, said in 1845, on laying the first stone of the gaol.⁽¹¹⁾

“Underneath the gaol at Warwick may still be seen the hideous vaults into which the illustrious Howard found his fellow-creatures thrust every evening at the hour of rest—if rest it was for them.

Their feet were attached to a long chain, stretching from one end of the dungeon to the other, and in this damp and fetid cell they were detained through the night."

The fault was not in the gaoler but in his masters, who assigned such a place for the purpose. As to the chain, the man must needs prevent escapes.

"Fast bind, fast find;
A proverb never stale in thrifty mind."⁽¹²⁾

Mr. Hill's brother, Frederic, sent me occasionally his reports as inspector of Scottish prisons; and I remember that in one of them he describes the cell into which a gaoler locked his prisoners for their night's unrest: it was not, I believe, subterranean; nor was there an iron tether: but fetid it was; so fetid towards morning, that the gaoler himself after opening the door rushed away to escape from the ill odours that issued forth.

The readers of Fielding's *Amelia* and of Goldsmith's *Vicar of Wakefield*, know something of what prisons once were: the reader of *Howard* finds that the realities outstripped the fictions.

Mr. Clay, in the memoir of his father, epitomizes the facts: we find that the evils had not been overlooked; but that the score of statutes intended to correct them had failed through not being enforced. Of one of the abuses, the exaction of fees, Mr. Clay says:⁽¹³⁾

"The great central evil of the old gaol system was, that the keeper, free from supervision and restraint, was left to make his living out of the gaol. A salary was seldom given; sometimes he paid a rent (in Norwich 30 guineas and £40 were paid for the two gaols), sometimes he bought his place. Under such temptation the race of gaolers, whether male or female—for the female species was not uncommon—grew greedy and brutal. Vile abuses arose from

their devices to reimburse themselves. Certain methods of extortion were legalized; for the law, as well as custom, virtually imposed upon prisoners the cost of maintaining their prisons. Either on his admission or on his discharge, and often on both, the prisoner paid certain fees; and during his imprisonment, if he lodged on the master's side, he paid sometimes for his board and always for his lodging; for most gaols were divided into two parts, the master's side and the common side. The common side prisoner paid little or nothing, except his fees on entrance or discharge; but on the master's side there were a few filthy luxuries on sale. Generally the gaoler farmed the prison allowance of food; and Howard found many gaols where the profits in this respect reached a hundred per cent. But fees, rents, and parings off the prison rations, were barren expedients compared with the prison tap. Every gaoler was a publican, and with his customers safe under lock and key he drove a thriving monopoly. As he fattened on the drunkenness and debauchery of his prisoners, their lucrative vices were systematically stimulated. Beer clubs and spirit clubs were patronized lovingly; the losels and harlots of the neighbourhood were freely admitted to carouse with their incarcerated pals; all the usual enticements of the pothouse were sedulously offered: cards, dice, skittles, fives, Mississippi, Porto Bello and billiards flourished vigorously. For the due promotion of drunkenness the prisoners were allowed to levy a tax on every new comer. This tax, *garnish*, *footing*, or *chummage*, often amounted to several shillings; in the case of a debtor it was generally double. If the poor wretch could not pay, they *let the black dog walk*; that is, stripped him, if necessary, almost naked. Commonly these garnish payments were carefully hoarded till they amounted to a round sum, and then they were spent all at once in a universal debauch, to the great gain of the tapster gaoler."

Such was one of the rank abuses which flourished in every county town of England: here was no room for boasting of superiority over continental slaves. No doubt there were optimists who maintained that as a prison was intended to be a place for punishment, the nearer it was to a hell the better for all concerned. To be sure this was hard on innocent persons locked up by mistake, and on youth whose simplicity was contaminated: but the lying excuse was ready, that though many accused

persons were acquitted by juries, this was not because they were innocent, but because the mere legal evidence was insufficient. I will show presently how false is this statement, by presenting some cases in which even the legal evidence has been sufficient, and yet the convicts have been unquestionably innocent.

But the horrors of our prisons were equalled by the draconian severity of our punishments. I well remember the long continued discussions on the proposal to abolish the punishment of death for forgery, a change urged especially by the Society of Friends. I am no admirer of the Quakers: I dislike their requirement of literal truth, running easily into a permission to disregard substantial truth: their enmity to the fine arts, their condemnation of beauty and elegance in costume and furniture, are repugnant to me; their plain speaking on certain subjects is almost worthy of the cynics. On the other hand, who can deny that William Penn and his successors have rendered great services to humanity? by treating the hated Indians as brethren; by refusing under all circumstances to hold a negro in bondage; by steadily and earnestly pressing the putting down the slave trade; by labouring to reduce the severity of our punishments.

The Quakers have long been addicted to money dealing: they were frequent victims formerly of forgers: they avowedly refused to prosecute the offenders, because they would be no parties to the punishment of death. Substitute imprisonment or transportation, they said, and every one who defrauds us shall be handed over to your tribunals; but so

long as you insist on taking away the criminal's life, we decline to prosecute him, and will rather submit to the losses we incur through offering impunity to guilt.

Other offences were punished in the same sanguinary fashion; and the practice was defended by Paley, not with any pretence that it was just, but by reasons of expediency.⁽¹⁴⁾

"Crimes must be prevented by some means or other; and consequently whatever means appear necessary to this end, *whether they be proportionable to the guilt of the criminal or not*, are adopted rightly because they are adopted upon the principle which alone justifies the infliction of punishment at all. . . . Thus, sheep-stealing, horse-stealing, the stealing of cloth from tenters or bleaching-grounds, by our laws, subject the offenders to sentence of death: not that these crimes are in their nature more heinous than many simple felonies which are punished by imprisonment or transportation, but because the property being more exposed, requires the terror of capital punishment to protect it."

Such were the principles on which our administration of justice was conducted, when Sir Samuel Romilly entered on his career as a reformer of the criminal law. A man of pure morals, of lofty aims, of an almost morbid tenderness, he had seen with horror the punishments inflicted for slight offences.

While he was still young and obscure, his attention⁽¹⁵⁾ was called to the subject by Madan's pamphlet, "Thoughts on Executive Justice," published in 1784. The theme of this little treatise was the principle "that the certainty of punishment is more efficacious than its severity for the prevention of crimes." The principle is sound: the true inference is that no pains should be spared in convicting offenders; but theoretical writers are often ignorant that in a great majority of cases the offender is unknown. If it

were certain that every felony or misdemeanour would be traced to the criminal who committed it and would be immediately punished, a man would no more be guilty of it by stealth than he is now guilty of it openly. Trace home every offence to its doer—if you can. But Madan and others draw a very different inference: they say, treat with the utmost rigour of the law every criminal you catch. In four cases out of five, or nine out of ten, the shoplifter escapes: you catch the fifth or tenth: punish him without mercy, even though he be a poor ignorant creature, or even though she be a mother who has stolen bread for her famishing children. Here is no certainty but the certainty of barbarity.

It was a great aggravation of this cruel folly of Madan's, that the penal laws at that time denounced savage punishments, which were sometimes inflicted, and which Madan would have had always inflicted so long as the criminal code continued unmitigated. Other reformers said: your code is too severe and defeats itself; you dare not hang up every pilferer of five shillings from a shop; humane shopkeepers will not give over to be hanged every poor creature who has taken a piece of cloth: reduce your punishments and these will be more regularly inflicted.

Madan suggested no relaxation of severity: he merely condemned with vehemence, judges and ministers alike, for mild administration and frequent pardons. This bitter remonstrance, Romilly tells us, produced a great temporary effect: some of the judges, and the government, tried to carry out the bloody policy. In 1783, the year before the work

was published, the executions in London were . 51. In 1785, the year after the publication, they were 97. And soon after the appearance of the pamphlet, there was the long unseen spectacle in London of 20 executions at once. But these excesses were so revolting that they soon ceased.

Romilly's attention was drawn to this treatise by Lord Lansdowne, who was convinced of its soundness. But "I was so much shocked at the folly and inhumanity of it, that, instead of enforcing the same arguments" (as Lord Lansdowne had wished), "I sat down to refute them." His pamphlet was called "Thoughts on Executive Justice:" it was highly spoken of, but had only a small sale.

Romilly had observed also, that the French revolution had hardened men's hearts.⁽¹⁶⁾

"If any person be desirous of having an adequate idea of the mischievous effects which have been produced in this country by the French revolution and all its attendant horrors, he should attempt some legislative reform, on humane and liberal principles. He will then find, not only what a stupid dread of innovation, but what a savage spirit it has infused into the minds of many of his countrymen. I have had several opportunities of observing this. It is but a few nights ago, that, while I was standing at the bar of the House of Commons, a young man, the brother of a peer, whose name is not worth setting down, came up to me, and breathing in my face the nauseous fumes of his undigested debauch, stammered out, 'I am against your Bill, I am for hanging all.' I was confounded; and endeavouring to find some excuse for him, I observed that I supposed he meant that the certainty of punishment affording the only prospect of suppressing crimes, the laws, whatever they were, ought to be executed. 'No, no,' he said, 'it is not that. There is no good done by mercy. They only get worse; I would hang them all up at once.'"

Romilly found too, that in the course of years, our code had become in practice more and more severe; because an object of a certain value, protected by

the threatened punishment of death, was not the same thing in the sixteenth, the seventeenth, the eighteenth and the nineteenth centuries.⁽¹⁷⁾

“As all the articles of life have been gradually for many years becoming dearer, the life of man has in the contemplation of the Legislature, been growing cheaper and of less account. A stop ought to be put to that shameful trifling with oaths, to those pious perjuries (as Blackstone somewhere calls them), by which juries are humanely induced to find things not to be worth a tenth part of what is notoriously their value.”

Romilly began his humane efforts in 1808.⁽¹⁸⁾ He had been elected member for Horsham, but had been unseated on petition: he was then brought in for Wareham; giving £2,000 for his seat rather than accept a gratuitous nomination from a patron. During the short time he was out of the house, he thought with regret that in the previous Parliament he had missed the opportunity of attempting to mitigate the severity of our code: he now determined to act. His friend Scarlett (Lord Abinger) advised him to take a bold course, by proposing the repeal of all the statutes which punish with death mere thefts, unaccompanied by any act of violence: but he thought it more prudent to begin with the most odious of them, dating back from the time of Queen Elizabeth (8 Eliz. c. 4), which makes it a capital offence to steal privately from the person. He introduced his bill, and met with no direct opposition; though Mr. Herbert, the member for Kerry, talked about the danger of innovation, and *the excellence of our Criminal Law*.⁽¹⁹⁾ In Committee there was far more opposition. One of the Welsh judges objected, that if this statute of Elizabeth were repealed, the punishment for picking pockets would be reduced to

seven years' transportation as the maximum, instead of being transportation for life as it ought. He added, as did another objector, that the crime was increasing in frequency; but Romilly replied that if so it was time to try milder punishment administered with more certainty. However, the bill got through the Commons; and the Lords passed it without opposition.⁽²⁰⁾ (48 George III c. 129.)

This success encouraged Romilly to further efforts.⁽²¹⁾ In June, 1809, he gave notice that in the next Session he should propose other alterations: accordingly in February, 1810, he obtained leave to introduce bills for the abolition of the punishment of death for stealing goods worth five shillings from a shop, or goods worth forty shillings from a dwelling-house. The Solicitor-General offered some opposition, with a panegyric on the wisdom of past ages, and with a declamation on the danger of innovation. Romilly was warmly encouraged by Dugald Stewart.⁽²²⁾

"I was more particularly interested in that part of your argument where you combat Paley, whose apology for the existing system I never could read without feelings of indignation. Indeed, I have more than once lost my temper in discussing the merits of that part of his book, with some of your countrymen, who were disposed to look up to him as an oracle both in politics and in morals. Your reply to him is, in my opinion, quite unanswerable."

When the report was brought up from the Committee,⁽²³⁾ a discussion arose on the principle of the bill relating to stealing from a house. It would have been amazing to find the strenuous opposition offered by such a man as Windham, if we did not know that notwithstanding his high moral and intellectual culture, he was so whimsically logical as to be an

avowed supporter of prizefighting and bullbaiting.^(23A) In this case his wrath was moved not so much by the provisions of the bill, as by the arguments used in its favour, and especially by the depreciation of Paley. Wilberforce and Canning supported the bill. Romilly's friends, the liberal opposition, idly wished it well, but were not in their places to vote for it. It was lost by 33 to 31.

The bill to abolish capital punishment for shoplifting was unopposed, and passed the third reading on the 4th May, 1810.⁽²⁴⁾ At the end of the same month, unfortunately, it was refused by the House of Lords, only 11 voting in its favour, while there were against it, 31, of whom 7 were bishops.

In March 1811, some progress was made; for the House of Commons, notwithstanding opposition by Perceval and others, passed the bill relating to stealing from a dwelling-house, and the other bills introduced passed unopposed. The Lords again threw out the whole except those as to stealing from bleaching-grounds.

In 1813⁽²⁵⁾ Romilly limited his efforts: bringing in a bill to abolish capital punishment in the cases only of stealing from shop, warehouse, or stable. The same result: passed by the Commons in March, it was rejected by the Lords in April. Truly, our forefathers excelled us in patience!

In 1816⁽²⁶⁾ the same drama was repeated: the upper house rejected the bill without even a division. Lord Stanhope privately told Romilly that "it was a bill to screen the greatest villains upon the face of the earth, men who were much worse than murderers."

"I stared with astonishment, as well I might; and my astonishment was not much diminished when he proceeded to explain his meaning. There are, he says, in London, a great number of young children who are thieves by trade. They are educated, he says, to this trade by men; such men are the greatest of villains. Shop-lifting is sometimes, nay frequently, committed by these boys, and when the boys are capitally convicted, the men who put them on committing these crimes are accessories before the fact, and *might be* capitally convicted too; and by this means *one might* bring to the gallows these worse than murderers."

To aggravate Romilly's disgust this year,⁽²⁷⁾ the House passed a bill creating a new capital offence: denouncing the punishment of death against persons riotously assembled who destroyed the machinery of collieries: "the bill passed through all its stages as matter of course, without a single statement or inquiry, or remark being made by any one." Romilly was unfortunately absent.

The year 1818 was the last year of Romilly's life:⁽²⁸⁾ he once more introduced his humane bill: in June, Parliament having been dissolved, he consented to stand for Westminster, then the classical constituency of liberal statesmen: he came in at the head of the poll, in spite of the efforts of his old friend Bentham, who on public grounds supported his opponents. In the autumn his wife died after an illness of a few weeks; and his grief, acting on a constitution morbidly tender, led to his death three days later.

He did not live to work out his beneficent schemes: though his last effort had this favourable circumstance; that Peel, then entering as Irish Secretary on his long and distinguished career, undertook that if the English bill passed, he would bring in a corresponding one for Ireland.

It was not till many years afterwards, that we finally freed ourselves from the cruel barbarisms that disgraced us.

“By statutes 7 Will. IV. and 1 Vict. c. 84, 5, 6, 7, 8, 9, and 91, the punishment of death is abolished in all cases of crimes not accompanied by personal violence, or which do not, by their immediate consequences, endanger life.”

We have reconstituted our prisons; we have reformed our criminal law: is nothing still left for us to do? I fear that a great deal is still left: there are still, I see, much thought and much effort wanted to improve the administration by our courts. The fault is not generally the lack of good will: at Petty Sessions, at Quarter Sessions, at Assizes, there is no want of humanity towards accused persons; no indecent haste, no browbeating, no straining of the law against them. Yet the results are often unsatisfactory, and too often shocking.

II.

IT is unsatisfactory that guilty persons should be acquitted: it is shocking that innocent persons should be convicted. It is very painful to see one unquestionably innocent, summoned to rebut a charge in Petty Sessions, before a public audience: it is still worse when such a person is committed, and subjected to alarm and anxiety during the months preceding the trial. Here is a striking example.

An Indian officer's widow, living at Brighton, was accused of setting fire to a house she had just re-

moved from. That the fire was kindled wilfully by some one was unquestioned; and though no probable motive was assigned, the circumstances were such that, as it appeared, the lady might well be the incendiary. She had removed the greater part of her furniture: she had locked up the empty house: she had returned to it alone, after buying some lucifer matches and borrowing a candle. On the trial it came out that a smell of fire had been noticed long before the lady had returned to the house; and that though she must have been aware that the house was full of smoke, she would naturally account for that by a customary down draught from the chimney next door. In short she was clearly proved innocent.

It is in fact, great injustice to the acquitted to say that they all owe their escape to a mere failure of justice, though I have known an elderly gentleman, familiar both with borough and county sessions, declare his belief, that in England no innocent person is ever convicted; nay, that probably, no innocent person is ever committed for trial. Would it were so!

What would my optimist friend say to this curious case given in the Autobiography of Dr. Alexander Carlyle? I give Jupiter's own words.⁽²⁹⁾

Optimist
opinion.

Dr. Alexander
Carlyle.

"There was a man of the name of Robertson, who lived near Belford, who was accused of having stolen a heifer, and killed it at his own house. The heifer had belonged to a person several miles distant from Belford, and was killed and skinned before it was seen by anybody; but the proof in its marks, and the colour of its skin, made it very like the one amissing. The man had no advocate, and being put on the boards, was asked by the judge (Yates) if he had any defence to make. He answered that he was in use of going annually to Danse fair, where he generally bought a beast or two for

his own use, and this was one he had got there. The judge summed up the evidence and charged the jury, observing in his conclusion, that the only defence the man made was, that he bought the heifer at Danse fair. Now it having been proved that this heifer was of English breed, which could not be bought at Danse, that defence would go for nothing. I was amazed at the ignorance of the judge, and the carelessness of the grand jury, and said to Colonel Dickson of Belford that the judge had gone quite wrong in his charge. He answered that Robertson was a great rascal and deserved to be hanged. I answered this might be true, but that he ought not to suffer for the ignorance of the judge and jury, for he knew as well as I did that the cattle of Northumberland were to be bought at Danse fair, nay, that half the cattle in Berwickshire were of that breed, so that if he would not explain this to the judge, I would. I at last prevailed with him to go round and whisper the judge, who, calling in the jury, retracted what he had said. He sent them out again, and in a few minutes they returned and gave in their verdict, Not Guilty. I am afraid such mistakes must frequently happen in England, in spite of the perfection of their laws."

Elizabeth
Canning,
1754.

In this instance the accused was not even convicted: in the next instance a step further was taken; the accused was convicted, capitally sentenced, but respited! ^(29A)

"Of the influence spoken of in the text," (interest of reputation and fear of shame) "the case of Elizabeth Canning, anno 1754, reported in the State Trials, affords a memorable example. Out of the knowledge of her friends, she had been absent from home for about a month, upon some love errand. On her return, being pressed by interrogations, she fabricated a story of her having been carried off for the purpose of violation to a house of ill-fame, a few miles from her abode in London; from whence, after being kept without food for weeks, in a manner almost miraculous, she at length made her escape unviolated. The story exciting public attention, two women were apprehended, and tried for their lives, as for having robbed her in that house, and one of them convicted. The story being a compound of improbabilities, the convict was respited; and in the interval, counter-evidence of the *alibi* kind presenting itself in abundance, she was prosecuted for perjury; and, after a trial of the unexampled duration of fourteen days, convicted: on evidence which, though at that time it divided the bench at the Old Bailey (composed chiefly of aldermen) into two

nearly equal parts,—leaves, at this time of day, not the smallest doubt. She was in consequence transported to America for seven years.”

The next case is distinguished by a more fatal result: an innocent man was accused, convicted, sentenced, and put to death. To be sure it happened on the Continent; and there, such sanguinary mistakes are, we think, to be expected.

French case:
Lesurques,
1796.

It was in France, in 1796, that Lesurques, a wealthy and respectable citizen, was guillotined by mistake, for highway robbery and murder.

The circumstances are familiar to us.⁽³⁰⁾ The mail between Paris and Lyons was stopped and robbed; the courier and driver were killed. Five men were engaged in the outrage, but at first only three were arrested. During the trial, Lesurques was in court as a spectator; and two female witnesses, looking round, agreed that he was one of the gang: their testimony was otherwise confirmed. This evidence was completed by an unfortunate coincidence such as happens every day, but of which we take no note unless something important hangs on it. Lesurques set up an alibi, the most conclusive but the most suspected of defences: he produced a jeweller, Legrand; who swore that on the 8th Floréal, the day of the murder, Lesurques was with him in Paris. Legrand supported his testimony by a book containing an entry of a transaction between them. But the judge, examining the writing, found that a figure of 9 in the date had been erased, and an 8 substituted. Now the validity of the alibi rested on this figure: for Lesurques could not have been present at the outrage if he was in Paris on the 8th, but he might have been

present at it and yet been in Paris on the 9th. This accident, or pious fraud, threw discredit on other evidence for the defence, and Lesurques was convicted and executed.

Declared
innocent.

After the trial, Couriol, also convicted, confessed his guilt; he declared Lesurques innocent, and mentioned as the real delinquent one Dabose who much resembled Lesurques, who had been seen that day disguised in a wig like Lesurques' hair, and who had suspiciously disappeared. It was all in vain: those were revolutionary times, when Frenchmen made light of life, and when judges felt it needful to strike surely and to strike hard; especially where the government service had been violently hindered. Six years passed away before all the gang were caught; but at last all of them had been guillotined. *Five* men had committed the crime: *six* had been executed: of the five, three had formally declared Lesurques innocent.

The
daughter.

At the date of this outrage and judicial homicide, Lesurques had a little girl: she lived to understand the shame that had fallen on the family: she became possessed with one idea, that of legally vindicating her father's memory; a process which is possible according to French law. After many vain efforts, she quite recently made one more, by appealing to the Court of Cassation to exercise their power of *rehabilitation*. The Court listened, conferred, and refused the prayer; declaring that "the question must be left to public opinion." The honest passion of a lifetime has been ungratified. Authority hates to condemn authority.

No English
rehabilita-
tion.

Thus much for French administration: is ours any

better? In form it is worse; for nowhere in England resides a power of rehabilitating a dead convict. Mademoiselle Lesurques could appeal to the Court of Cassation: in England no court would have been open to her: among us, dead men have no rights.

Nay, even living men falsely convicted, can obtain no public declaration of innocence: all they can get is a royal pardon; a pardon for having been falsely convicted; in fact a remission of further punishment, without compensation for past injustice: a pardon too, granted on evidence taken in secret, and therefore open to suspicion of error or favour.

I am far from believing that there is too great facility in granting such pardons: on the contrary, I see that apathy, indolence, routine, all lend their aid to the side of refusal. The late Mr. Clay, the "Prison Chaplain," after long experience, declared that "it would seem to be a principle of English law, that though the slightest *doubt of guilt* may save an accused party from conviction, scarcely any amount of *evidence of innocence* after conviction can avail in the convict's favour." It must be recollected on the other side, that this evidence of innocence is not produced in Court, in the presence of an impartial judge, an acute bar, and a vigilant public: the desideratum is a means of openly trying such cases over again, with all these aids. It is remarkable that in Austria, where trial by jury is only just introduced, provision is made for holding a new trial, when the judge suspects that the accused has been wrongly convicted.

Pardons too difficult.

A case recorded by Sir Samuel Romilly, appears to me a sad blot on English justice; so bad an

Eliza Fenning, by Sir Samuel Romilly.

example that but for Romilly's immaculate character and thorough appreciation of evidence, I should not believe it: nothing but the harshness of a revolutionary period can explain it.⁽³¹⁾

“The case of Eliza Fenning is that of a servant girl who, in the month of April, 1815, was tried at the Old Bailey, before the Recorder of London, for the crime of administering poison to her master and mistress, and her master's father, which, by an act of Parliament, commonly called Lord Ellenborough's Act, has been made a capital felony. The *only evidence* to affect the prisoner was *circumstantial*. The poison was contained in dumplings made by her; but then *she had eaten* of them herself—had been as ill as any of the persons whom she was supposed to have intended to poison; and her eating of them could not be ascribed to art, or to an attempt to conceal her crime; for she had made no effort whatever to remove the strongest evidence of guilt—if guilt there was. She had left the dish unwashed; and the proof that arsenic was mixed in it was furnished, by its being found in the kitchen, on the following day, exactly in the state in which it had been brought from table. No motive, besides, could be discovered for an act so atrocious. Her mistress had, indeed, reproved her about three weeks before for some indiscretion of conduct, and had given her warning, but had afterwards consented to continue her in her service. This was the only provocation for murdering not her mistress only, but her master also, and the father of her master. A crime of such enormity, produced by so very slight a cause, has probably never occurred in the history of human depravity.

“*The Recorder*, however, appeared to have conceived a *strong prejudice* against the prisoner. In summing up the evidence, he made some very unjust and unfounded observations to her disadvantage, and she was convicted. The *singularity* of the trial attracted the notice of many persons to her case. They interested themselves in her favour. They applied to the Crown for mercy. The master of the girl was requested to sign a petition in her behalf; but, *at the instance of the Recorder*, he refused to sign it. An offer was made to prove *that there was in the house* when the transaction took place, a person who had laboured a short time before *under mental derangement*; and in that state had declared *his fears* that he should at some time *destroy* himself and his family: but all this was unavailing: the sentence was executed, and the girl died apparently under a strong sense of the truths of religion, but solemnly protesting to the last moment that she was innocent.”

It must be remembered that at that time, as for long afterwards, prisoners were not allowed counsel to defend them. The judge was supposed to watch over their interests. How well this modern Jeffreys performed his duty, we have seen: such a judge ought to be “damned to everlasting fame.” There is some little comfort in the acknowledged singularity of the case.

Mr. Clay’s declaration which I have quoted, grew out of the case of John Wilson, a man convicted of entering and plundering the warehouse of his employers. The crime was effected on a Sunday morning. The damnatory evidence was that of Mr.

Mr. Clay :
John Wilson.

Cheese and his brother, a boy of twelve: the elder brother deposed that he knew the prisoner as Mr. Good's porter; that passing the warehouse on his way to church, he saw the prisoner at the door, passed close to him, but did not speak to him: the younger brother picked the prisoner out from among twenty persons as the man he had seen. The defence was an alibi, proved by unknown witnesses of the prisoner's own class: none of the stolen goods were traced to the prisoner. As the man was innocent, the explanation of Mr. Cheese's evidence, is that mentally associating the warehouse and the porter, he had unwittingly mistaken a stranger resembling Wilson for Wilson himself. The picking out Wilson by the younger Cheese, followed inevitably from this resemblance.

Wilson at
Preston.

Wilson after a short time came under Mr. Clay's care at Preston; and though he asserted his innocence, was believed to be guilty; until there appeared in the *Times* a report that Naylor, a recent convict, had confessed the commission with two others, of the crime for which Wilson was suffering.

Mr. Clay
applied in
vain.

Mr. Clay then felt it his duty to sift the story. He took infinite pains to gather all the particulars: after cross-questioning Wilson himself, he wrote to the prosecutor; he induced a friend in London to verify Wilson's statements: he got and well weighed the shorthand writer's notes of the trial. Happily, Naylor the confessing convict, was also sent to Preston; and this gave the opportunity of learning minute particulars, and of ascertaining by careful watch that Wilson and Naylor were not acquainted with each other. Convinced of Wilson's innocence,

Mr. Clay applied to the Home Office: he received an answer that after a careful review of all the facts, and a reference to the judge who had tried the case, there appeared no sufficient grounds for granting a pardon.

Mr. Clay persevered. Being in London he obtained an interview with the judge, and found that he took a favourable view of Wilson's case, and suspected that Mr. Cheese had been mistaken as to the identity. The Home Office however, was still obdurate. The Austrian rule would probably have produced a new trial. We hear that in Prussia there is a popular cry for "liberty as in Austria:" it would be strange if England should adopt as a popular cry, "justice as in Austria."

One might have suspected that the Prison Chaplain had unintentionally coloured the Judge's conversational remarks, but he gives a letter from him. The judge wrote that he had gone and examined the place of the robbery: that the identification of the prisoner by Mr. Cheese was inconclusive, because no words had passed; and he concluded thus:

The judge
favourable.

"If it rested with me, I should recommend a remission of the sentence; but it is not with me, and I cannot, it seems, convey my impressions so as to satisfy those with whom it rests, and I cannot but admit that they have much reason on their side."

The judge acted with consistent justice and kindness: the last clause of his letter, officially exonerated the Home Office.

If all this evidence had been given at the trial, we may safely say that the jury would not have convicted Wilson: indeed the judge would probably have directed an acquittal. Surely then, a pardon,

Mr. Clay's
dictum true.

or rather a rehabilitation, ought to have followed. The refusal by the Home Office seems to justify Mr. Clay's opinion, that though a slight doubt may acquit a man on trial, scarcely any strength of evidence will make sure of a pardon. Some will suspect that the Home Office had private unfavourable information: the judge's letter proves the contrary. As a younger man I should have shared the suspicion; but age has rendered me more credulous as to the folly and injustice attendant on private trials. Publicity, said Bentham, is more important than trial by jury.

Wilson got a
ticket of
leave.

The end of Wilson's case was this: after an imprisonment of nearly a year and a half, he received a ticket of leave.

Mr. Clay gives some particulars of other persons wrongfully convicted; of whom some obtained a pardon; but none, a declaration of innocence or compensation for unmerited suffering and disgrace.

It is not pretended that the false convictions form a large proportion of the whole convictions; but my own experience has shown me the necessity of providing legal means of dealing with such as there are. In taking my turn as one of the legal Visitors of the Birmingham Borough Gaol, I have been occasionally told that such a prisoner has certainly been committed by mistake: I could not easily believe that the experienced governor and warders were over-ready to attribute innocence: and even with regard to chaplains, a race supposed to be credulous, it has been my good fortune to be

connected with men of sound sense, whose experience has corrected the first effervescence of their youth.

At Petty Sessions too, the same lesson has been taught me. One morning, a mechanic was put into the dock, and a Scotchwoman appeared as complainant. According to her tale, she had arrived by railway the day before, and as she left the station the prisoner offered to carry her bundle, but took an opportunity of escaping with it up a bye-street. She found her way to the police-station, and induced an inspector to send a policeman with her in search of the thief: after wandering about some time, the two met the prisoner, and she declared that he was the thief. She now swore that this was the man who had stolen her bundle. The two sitting magistrates were strongly impressed by the tale, but as the *corpus delicti* had not been traced to the prisoner, they declined to commit on the unsupported evidence of a stranger. The prisoner had of course, produced men in their working dresses to prove an alibi. When the senior magistrate pronounced the decision, the woman said in pathetic tones, "and what is to become of me?" On this, the chief superintendent was ordered to pay her fare to Liverpool; but from what he saw of her during the afternoon, he took the responsibility of refusing to do this.

Alice Gray's
false charge.

Some time afterwards, there appeared in a Wolverhampton paper, a report of a similar case; with this difference, that the boys accused had been known thieves, and were committed. Inquiry was made; and the complainant turned out to be the same Alice Gray who had failed in Birmingham. On

How
discovered.

further investigation it was found that the woman was a released convict of execrable character; and that she had habitually practised this trick, and had convicted several innocent persons at different places. The unpaid magistrates had the satisfaction of learning that the stipendiaries had been those principally imposed upon.

*No corpus
delicti.*

I relate the case from memory; but I clearly recollect how excellent an actress the woman was. As a canny Scotchwoman, with plain bonnet and clean shawl, quiet self-possession and modest demeanour, she seemed another Jeannie Deans. But for the rule adhered to, of requiring unquestionable evidence in the absence of the thing said to be stolen, the perjurer would have succeeded. The observance of this rule however, is difficult in the case of the awkward offence of attempting to pick pockets, and I fear that unhappy consequences sometimes follow.

Mr. Bewicke. A more notorious case⁽³²⁾ was that of Mr. Bewicke, a country gentleman, who in 1861 had an execution issued against him for £49. The five sheriff's officers employed, were men of vile character; having been severally convicted of poaching, of breaking the peace, of wife beating, of repeated larceny, and of perjury. Arrived at Threepwood Hall, they found that Mr. Bewicke had shut himself up, and had left them to seize moveables outside; but they had the pleasure of exchanging incivilities with him, and of provoking him to produce a revolver in reply to pistols they produced. Irritated also at having to pass the night in an outhouse, they appeared before the

magistrates, and swore that they had been fired at by Mr. Bewicke. On this charge he was committed, and in due course tried, convicted, and sentenced to four years' penal servitude.

The charge was false. Mr. Bewicke had fired his pistol, but only to reload it, and had not pointed it at the men; unless my memory deceives me, it was impossible that a shot from the window through which he had fired, could have taken the alleged direction. I must confess that in matters of this sort, we often neglect means of getting at the truth. If the magistrates had visited the scene of the alleged offence, they would probably have escaped the injustice committed. English administration is rough and ready.

Charge was false.

Mr. Bewicke had invited his misfortune by the folly of refusing to employ professional men for his defence. After his conviction a solicitor was set to work, and induced one of the gang to betray his comrades. As Mr. Bewicke had money at command, he had brought his trouble on himself by his wrong-headedness, and had little claim for compensation.

Mr. Bewicke's wilfulness.

The late Mr. Toulmin Smith, in his excellent periodical, the *Parliamentary Remembrancer*, compared the case with that of Mr. Barber,^(32A) a solicitor wrongfully convicted a few years earlier; and to whom Parliament had voted £5,000 compensation. Mr. Smith contended that Mr. Bewicke's wilful negligence had deprived him of all such claim; besides that he had not been ruined, as Mr. Barber had been in a professional career.

Mr. Toulmin Smith's opinion.

One unusual hardship however, had been inflicted. The Trustees of Greenwich Hospital had become

Moveables sold.

entitled to Mr. Bewicke's effects, which on the conviction had escheated to them as Lords of the Manor of Langley. They took possession, and sold them for £430, while to him they seemed worth four times as much. On his pardon, they could not restore the dispersed effects, but they handed over the £430, after deducting £50 for costs. The grievance was twice brought before the House of Commons; on the second occasion a Committee was appointed, and on the 17th June, 1864, they made a report, recommending that the Crown should reimburse Mr. Bewicke.

Similar case
300 years
ago.

Mr. Toulmin Smith in the article I have mentioned, related a greater hardship of 300 years before.

"In that case the representative of a very ancient and renowned family, who had been for centuries Lords of Birmingham, was by means of a conspiracy, convicted of felony, and was despoiled of his estate. The sad tale is told, though with several mistakes of detail, in Dugdale's *Antiquities of Warwickshire*. But Edward Birmingham, less fortunate than William Bewicke, recovered neither his goods nor his estate."

Miscellaneous
cases
recently.

Such cases as the above fix the public attention; which is but languidly attracted by others affecting less important persons, equally sensitive to suffering and ruin. I copy a few paragraphs which I have incidentally collected from the newspapers, between October 1866, and February 1869. ⁽³³⁾

"At the last Old Bailey Sessions, Dr. Juler prosecuted two youths for attempting to extort money by an odious accusation against him, and they were convicted and received a sentence of seven years' penal servitude. Last week a warrant was applied for and granted against the doctor for perjury. He

got information of this, and at once absconded. It is believed he has gone abroad, and it is certain that all his furniture has been sold off by auction."

"A boy named Wyatt was sentenced last week to three months' imprisonment at the Westminster Police Court for stealing two pots of jam. It now appears that he was perfectly innocent. A gentleman connected with the Parkhouse Ragged School went yesterday before Mr. Selfe, and took with him the boy who really did steal the jam. Mr. Selfe advised that immediate application should be made to the Home Secretary on the subject."

"The two Reading policemen who were some time since charged with perjury, were tried at the Assizes yesterday. Their names were Fenner, a serjeant in the force, and Palmer, a private constable. Fenner took a man named Belcher into custody for drunkenness, and swore that he assaulted him, calling Palmer as a witness. A man named Parsons gave rebutting evidence, but the magistrates disbelieved him, and *committed him for perjury*. Subsequently this man was able to clear himself, and the two officers were then apprehended and committed. Palmer pleaded guilty at his trial, acknowledging that since he swore falsely he had never had a happy moment. He got off with a year's hard labour. Serjeant Fenner was sentenced to five years' penal servitude."

Only one step was wanting to make this case complete: viz., that Serjeant Fenner should afterwards be proved innocent. In a more recent case this completeness was attained. The man originally accused was declared innocent: the policemen who appeared against him were declared to be perjured;

were dismissed the force, and utterly ruined. After one of them had, I think, died broken-hearted, the man originally accused was again brought up for a repetition of the offence alleged against him; his guilt this time was fully proved; and the magistrate declared that he now believed him to have been guilty on the former charge, and that the unfortunate policemen had been ruined for performing their duty.

“A few sessions back a man named George Dundas was convicted before the Recorder at the Central Criminal Court of a highway robbery accompanied by violence upon a gentleman named Thorne, a collector in the service of Messrs. Young and Bainbridge, the Wandsworth brewers, and was sentenced to ten years’ penal servitude and to receive twenty lashes with the cat. Grave doubts were entertained at the time whether Dundas was the man who had committed the robbery, he having been convicted on the evidence of the prosecutor alone, who was however positive as to his identity. It seems that both the recorder, the police, and the prison authorities, are now convinced that there has been a mistake, and that steps will forthwith be taken to procure a pardon for the prisoner. In consequence of the doubts which arose immediately after Dundas’s conviction as to his guilt, the sentence of flogging was not carried out.”

Three months later I find the following natural remarks.

“George Dundas, who was convicted of a garotte robbery at the Central Criminal Court in July last, and was sentenced to ten years’ penal servitude, has

just received a free pardon, it having been discovered that he was entirely innocent of the crime. Garotte robberies are invariably punished by flogging as well as by penal servitude. Has this innocent man been flogged, as well as imprisoned for six months, and will he receive no compensation for what he has undergone? Pardon for a crime of which a man is admitted to be innocent and for which he has been punished is surely a mockery."

"A man was arrested the other day by some Cornish policemen for setting fire to a linhay. The police swore before the magistrate that the man's boot corresponded with a footprint near the linhay. The magistrate, a clergyman, knowing the man to be honest and industrious, doubted the story of the police, and went himself to the place with the man's boot and a pair of compasses. He made an impression with the boot by the side of the track compared by the policemen, and not only found that there were the impressions of *four* rows of nails in that track and only *three* rows of nails in the boot, but that the track was an inch longer and wider than the footprint he had himself made. Of course, the man was dismissed, and the police censured."

This was only a case of false imprisonment. I give it because it illustrates what I said before as to the importance of having the site of the offence visited by the magistrates: and also because it brings out what I have myself had the opportunity of observing, the wilful carelessness of policemen in swearing to a foot track.

Here is another example of the uncertainty of such evidence: "A case of false imprisonment has

occurred in Cornwall. About four years ago, Mr. Shovell, a farmer of Callington, found that the tongue of one of his horses had been maliciously cut out during the night. An unfriendly feeling between him and his brother-in-law, Michael Harris, existed, and suspicion fell on the latter, who was tried and found guilty of the offence *solely* on the evidence of *footmarks*. The sentence was eighteen months' imprisonment, which completely broke down Harris's constitution. The man before his death sent for Mr. Shovell, his accuser, declared his innocence of the crime, and freely forgave him. Immediately after Harris's imprisonment, a known bad character left the neighbourhood, and other circumstances have since transpired fully establishing the innocence of the man who died in prison."

Yet we have no means of rehabilitating this man's memory, or compensating his family for their pecuniary loss.

Footsteps again! "Another case showing the danger of relying on foot-track evidence alone has come before the Truro county court. A boy was given into custody by a Mr. Knight for stealing a duck. The only evidence against the lad was that suggested by a comparison of his boots and certain footmarks; nevertheless he was put in prison. In the meantime the duck was found and restored to its owner, and the boy was discharged by the magistrates. He subsequently brought an action in the county court against Mr. Knight for £15 damages, and got a verdict for the full amount."

After reading these cases one would be very cautious about relying on the evidence of foot-tracks.

A curious case was related to me by a friend, in which an examination of a lady's foot proved her best defence. In a southern port this young lady, who was living with her father, was horrified by a summons to appear before the bench on a charge of fraud. She of course obeyed. A shoemaker was the complainant: he deposed that sometime before, a young lady had come to his shop, had bought a pair of shoes, had put them on, and had gone away in them promising to call and pay, but never appeared again. She had left her old shoes at the shop. The man walking along the street long afterwards, had met the defendant, and recognizing her as the fraudulent purchaser, had watched her home, learnt her name, and got the summons against her. Notwithstanding the lady's indignant denial, the man reiterated his certainty that she was the offender. It was not likely that the magistrates would convict on such unsupported evidence, even if the case were more than one of a debt; but a hasty dismissal would have left an unpleasant shadow on the lady's character. At last, a Quaker magistrate asked for the old shoes and suggested that they should be tried on the defendant. Now the defendant had feet which she willingly concealed, because they were far too large to be in harmony with her very pleasing person. The shoes proved quite too small for the unshapely feet, and the lady went home moderately well satisfied. Her character was saved at the expense of her beauty.

One or two recent cases I will give at rather more A drover.

length. The first is that of a drover convicted of sheepstealing; who though innocent, would have had to undergo his full sentence, but for the kind and untiring energies of one man. How many others, wanting such aid, must have borne years of undeserved disgrace and suffering, or like the unhappy Cornishman I have mentioned, died broken-hearted!

On oath of
three police-
men.

This innocent convict was a young drover named Bell, and he was convicted on the oath of no less than three policemen, all of whom swore that they had seen him in possession of certain stolen sheep: he was sentenced to 5 years' penal servitude. In August 1868, at Clerkenwell, it was clearly proved that he was innocent; on the 23rd, he was liberated from the convict prison at Pentonville; and on the 29th, the real thief was tried before Mr. Serjeant Cox, was convicted, and was sentenced to 14 years' penal servitude. Bell's innocence had been established by Mr. Guerrier, a salesman, whose stubborn energy had shown him worthy of his name. Besides the loss of his time, he had incurred a heavy expense; and I am happy to say that on application to the government, during Mr. Disraeli's administration, it was promised that any reasonable claim should be satisfied.

Maguire as a
Fenian.

A much more alarming example, as showing the uncertainty of verdicts even in capital cases, is that of Maguire. He was one of the Fenians arraigned at Manchester in the autumn of 1867, for having in open day, on the high road, stopped the prison van, violently broken it open, and shot a warder in the

execution of his office. The trial did not take place in a corner, at the fag end of an assize, against an obscure, undefended prisoner: nor was the jury misled by a passionate conviction that someone must be punished, since the other accused were unquestionably guilty. The whole nation watched the proceedings: the accused claimed the dignity of patriots. We might have expected that Maguire, after the clear proof against the three other prisoners, would have received the benefit of a doubt. Yet, though innocent, he was convicted.⁽³⁴⁾

It will be remembered that the newspaper reporters (no doubt some of the best of their class, selected for the dignity of the occasion) combined together to represent to the crown their deliberate opinion that Maguire was innocent. A miserable satire on a court of justice! when a legal jury, empanelled for a special duty, informed by the debates of counsel, and instructed by an impartial judge, has to be supplemented or corrected by an amateur and self-constituted tribunal: by a knot of men of unusual intelligence no doubt, and of experience also, but still not acting under the responsibility of judicial authority.

The
newspaper
reporters.

Maguire was pardoned: but what horrors must he have unjustly suffered while the sentence of death hung over him!

Pardoned.

I will give one other example of a man who narrowly escaped hanging; and that for a crime afterwards confessed by another. It is that of the Italian Pelizzoni, or Pelizzioni, in the spring of the year 1865.⁽³⁵⁾

Pelizzoni.

The facts :
Mogni con-
fessed,

The facts, as stated in the *Spectator*, were these. Pelizzoni was convicted and capitally sentenced, for having stabbed to death one Michael Harrington, in a quarrel at the Golden Anchor, Saffron Hill. The evidence appeared clear, and Baron Martin declared himself convinced. However, Mr. Negretti, the London optician, received information which induced him to go to Birmingham to see Gregorio Mogni, a cousin of the convict, who, in consequence of his persuasion, surrendered himself as the actual murderer.

and was
convicted.

Upon this, the self-accused Gregorio Mogni was indicted, and on the 4th March 1865, was convicted of manslaughter.

Baron Martin, who had presided at the first trial, was not convinced of Pelizzoni's innocence : nor was Mr. Justice Byles, who had sentenced Mogni. It was therefore determined to try Pelizzoni again ; of course not on the capital charge, for that was impossible, but on the minor charge of stabbing another man, Rebbeck. Each of the three trials was, very fitly, presided over by a different judge. Baron Bramwell, who presided over the last of them, in summing up, pronounced it clear that the stabbing of Rebbeck was committed by the murderer of Harrington, and declared that as Gregorio Mogni was under sentence for the murder, it was impossible to convict Pelizzoni of the stabbing.

Third trial :
Pelizzoni
acquitted.

The counsel for the prosecution on this third trial, had said that the conflicting evidence was so distinctly contradictory, as to prove unquestionable perjury on one side or the other. Baron Bramwell denied this. Nor did he blame the police who

had got up the case. Mr. Toulmin Smith in his *Parliamentary Remembrancer*, even after this third trial, maintained that Pelizzoni was guilty. For myself, after the extreme difficulty or impossibility which I have found in getting at the truth as to offences arising out of drunken rows, I can believe Pelizzoni's innocence, notwithstanding the strong evidence against him. It is hard to resist the confession of Mogni, and to believe that to save his cousin from hanging, he exposed himself, being innocent, to the risk of the same fate, and to the certainty of a long imprisonment, amounting to ruin for life. Such self-sacrifice is in the highest degree improbable: grossly inaccurate evidence on oath is not highly improbable. I accept Mogni's guilt as far more probable than Pelizzoni's.

If indeed I pinned my faith to the *Times*, a very clever article of the 17th April 1865, would oblige me to believe Pelizzoni guilty. But then I must disregard Baron Bramwell's dictum, and I must believe that perjury had been committed: for the *Times* asserts that the witnesses could not have been mistaken as to who was the murderer. Besides, the *Times* concedes a difficulty. According to the witnesses against Pelizzoni, he was the only Italian who entered the English room; he stabbed two Englishmen; he never left the room; yet no knife was found there. But if no knife, how could there be stabs? Mogni's account has no such difficulty: he said he entered the room, stabbed the two men, left the room again, and gave the knife to a companion, who carried it away. Pelizzoni came in afterwards, and was supposed to be the murderer.

Times' article:
but knife
wanting.

Explanation
of erroneous
evidence of
many
witnesses.

How does the *Times* clear up the difficulty? In no way whatever. It only appeals to the cloud of English witnesses, who, as it thinks, could not be mistaken. If only one or two of the English party had sworn against Pelizzoni, the difficulty about the knife might have been deemed fatal: but against such a mass of testimony it must be disregarded. Judging from experience, I give little more weight to a dozen such witnesses than to one or two. Unconsciously, a party of persons talking over such a matter, come to believe that they saw what they really heard from others: they are certain of the truth of what they say, but they are mistaken as to the grounds of their certainty. I have seen a case got up by an honourable solicitor: I have watched the rehearsal: I know that a trial is a drama in a theatre called a Court of Justice; the police or the solicitors being the stage managers. Each answer is known beforehand, and the witnesses are duly arranged so as to produce the required effect. Without the safeguard of cross examination, such a trial would become a grotesque and frightful melodrama. A crowd of witnesses who all profess to have seen the same thing at the same moment, ought not to go for very much. Their evidence might be enough to outweigh the difficulty of the absence of a knife: but it certainly was not enough to outweigh this and Moggi's confession of guilt taken together.

Of eleven
capital con-
victions, two
innocent,

This exhausts my list of wrongful convictions. But a recent Parliamentary proceeding⁽³⁶⁾ has added painfully to my conviction of the injustice we are

constantly committing. In the spring of 1869, a good deal of dissatisfaction had been expressed as to the exercise of the royal prerogative of pardon: and on the 22nd April a question was asked in the House of Commons. "The Home Secretary explained that Charles Wiltshire, who was convicted of murder at Gloucester, had been reprieved in consequence of the judge and ten of the jurymen having intimated that in their opinion he had no intention of killing the woman Nurse; that both she and Wiltshire were drunk, and that her death was accelerated by exposure. Excluding cases of child murder, in which as a matter of course a reprieve was granted, eleven sentences of capital punishment had been passed since 10th December. Of these 11 convicts, 6 had been hanged; 2 (Sweet and Atkins) *were pardoned because innocent*; another (Bisgrove) was reprieved because insane; and 2 (M'Donald and Wiltshire) had had their punishment commuted to imprisonment for life."

As regards Wiltshire, no doubt the judge and the ten jurymen were right in declaring that the evidence failed to prove an intention to commit murder: though according to the man's subsequent confession, which however, reached us informally, hanging would have been a milder punishment than the wretch deserved.

But what shall we say to the statement, that of eleven persons left for execution, two had proved innocent?

Two out of eleven! nearly one-fifth convicted and sentenced to die, though innocent! It confirms the opinion of a late friend of mine, a magistrates' clerk

in Birmingham, a man of singular thoughtfulness, that a prosecutor may get a conviction for murder, on evidence insufficient to prove a common larceny. Is it that the horror which waits on murder so disturbs the minds of men that they will have a victim?

and one
insane.

I cannot help noticing too, that another of the eleven convicts was reprieved as insane. I concede that the fact of his being insane after conviction is no proof of the condition of his mind when he committed the offence: the previous imprisonment, the trial in open court, the awful black cap, might well disturb the balance of the strongest mind, and much more a mind weak enough to be goaded into homicide. But we know that many crimes of violence are committed by madmen: that prisoners are often acquitted on the plea of insanity. In our comparative ignorance of that fearful disease, and of the infinite disguises it assumes, we must necessarily deal with many madmen as if they were sane: doubtless we often hang a man for a homicide for which he is not morally responsible.

Abolition
of capital
punishment.

These considerations have landed me in a conclusion from which I long revolted. I have little sympathy with the sentiments generally appealed to by the enemies of capital punishment. As to the dignity of human nature, and the sacredness of human life, it is vain to plead these in favour of the man who deliberately, and in his sound senses, murders another. I feel the force of the repartee: abolish capital punishment by all means: let

Messieurs the murderers set the example. Nor, so long as I uphold the right of self-defence, can I refuse the right of capitally punishing a murderer. I have no hesitation in shooting a villain who attempts my life. I have no doubt as to the lawfulness of a just and necessary war: nor do I dispute the right of a community to rid itself of a sane and deliberate murderer.

But when I hear a man of long experience, declare that capital convictions are often obtained on insufficient evidence; when I see a Fenian tried with unusual formality, in a crowded court, with all the nation as spectators, convicted, but immediately pardoned as innocent; when I see an Italian rescued from the imminent rope by the voluntary surrender of the actual criminal; when I am told officially that of eleven capital convicts two prove to be innocent and one turns out to be of unsound mind; remembering too our inability to discover by short inspection whether an offender is or is not a lunatic; I almost cease to envy the Home Secretary his political greatness, subject as it is to the agonizing responsibility of pardon or refusal, and I arrive, very unwillingly, at the conclusion that it would be wise to abandon capital punishment. Even in the clearest case, where the man is taken red-handed, and avows his deed, there still remains the question whether his mind was so disturbed as to relieve him from responsibility.

We need have no scruples about a sentence of long imprisonment: this does not deprive the innocent man of his opportunity for clearing himself. If the convict is mad he must needs be

confined somewhere; and time will show him entitled to suitable treatment.

Can our administration be improved?

One asks whether improvement is possible in our administration of justice: I will not say that it is impossible. But what we want first, is a means of reconsidering those cases in which new evidence turns up, or mature consideration discredits a jury's verdict. In the case of Wilson, detailed by Mr. Clay, the judge doubted the correctness of the verdict: this ought to have secured a new trial, just as will be the case in Austria under the recent jury law.⁽³⁷⁾ Besides; it is time to have done with granting pardons on the ground that convicts are innocent: we ought distinctly to pronounce that the guilt has been disproved. Again; in every case of wrongful conviction, ample compensation should be made, as far as the case admits of it.

De Maistre's levity.

It is painful to find distinguished writers treating this matter of false convictions with something like levity. Thus, De Maistre⁽³⁸⁾ in his *Soirées*, speaks lightly of the notorious case of the Calas at Toulouse; as to which Voltaire had put forth all his genius and energy and personal influence. De Maistre says, "Let us have done with Calas. For an innocent man to perish is a *misfortune like any other*, that is to say, common to all men. For a guilty man to escape, is another exception of the same kind." The execution of the innocent, and the escape of the guilty, are incidents such as drowning at sea or escape from a wreck.

Paley's apology.

Paley's remark is better known. "He who falls

by a mistaken sentence, may be considered as falling for his country; whilst he suffers under the operation of those rules, by the general effect and tendency of which the welfare of the community is maintained and upholden." Such a reflection may have strengthened Socrates in his intrepid refusal to escape from prison: but to the many, who are not philosophers, it would appear indecent trifling: it would have irritated Lesurques in the presence of the guillotine, or Maguire in his condemned cell.

Paley quotes the received maxim "that it is better for ten guilty persons to escape than for one innocent man to suffer": he denies its truth, and after some argumentation, concludes with the dry philosophical reflection I have given. Now suppose ten of us have had our gardens robbed: that the ten thieves should escape is no great matter; but if on the eleventh offence an innocent man is captured and convicted, to him it may be ruin. The wrongful conviction of the one is a far more intolerable mischief than the escape of the ten guilty.

Ten guilty
and one
innocent.

In the case of graver crimes, the popular utterance may not be so distinct. Say that in Liverpool ten murders have been committed without the conviction of one murderer. If the victims had been of all classes, a magistrate and a shopman, a cabman and a waterman, with half-a-dozen dock labourers, there would be such an outcry as would disturb the calm administration of justice, and would obscure for the time the popular maxim. But let a man be hanged, and immediately afterwards be proved innocent: the consciousness of all men that the same terrible mis-

fortune might fall on them or their sons, would restore the maxim to all its force.

III.

I HAVE already said that our administration may be susceptible of improvement: but by what changes? Some believe that if every prisoner were openly examined and cross-examined as a witness, that would much facilitate our proceedings. Probably the experiment will be tried.

Some see great imperfections in the constitution of our inferior courts. In a recent paper⁽³⁹⁾ by the Recorder of Bath, it is proposed that the County Quarter Sessions should be presided over by a Recorder, just as the Borough Sessions are. He is probably right in saying that at present the Chairman is often incompetent: and when we see that within a short period two peers have been appointed to that office, one being quite unfit for it, we must confess that a change is needful.

At Petty Sessions again, says Mr. Saunders, there ought to be a Stipendiary Magistrate, not only in the few large towns which now have one, but throughout the country. At present, we are told, the real magistrate is the clerk, who is a solicitor, and who pulls the strings by which the justices are moved. It might be replied, that an experienced solicitor may be just as competent a judge as a barrister of so many years' standing: it might be added that the clerk who is said to pull the strings of the marionnette magistrates, has to do something far more difficult than to pull strings; that he has

to explain to the magistrates the grounds of his opinion, and in doing this, to make clear to himself what those grounds are. My own experience is, that though in small and formal matters, the clerk does the work, in cases of real importance and of difficulty in the interpretation of evidence, the clerk declines the responsibility of deciding, and calls upon the magistrates to say yes or no. I have heard it said that magistrates act as a jury, with their clerk as legal assessor. I am not certain that a good Stipendiary does his work better than ordinary justices, advised by a good clerk: and you may have an incompetent Stipendiary, just as you may have an incompetent clerk. Where however, the work is heavy and complex, as it is in very large towns, I believe a Stipendiary to be useful.

But even there, such an officer is useless for the purpose at present in question: the purpose of preventing the committal of innocent persons. I have already mentioned the case of Alice Gray, the infamous woman who accused many innocent persons, and got several of them committed: in this case, it is said, the majority of the committing magistrates were stipendiaries. I fear that a professional justice is less anxious than an unpaid justice, to avoid a mistake of this kind: partly because he trusts his character as a lawyer to shield him from attacks, and partly because the constant contact with criminals, and a press of business, tend to make him a little callous. I must add however, that the only Stipendiary I am familiarly acquainted with is not in the least callous. Nor has he any such pressure of business as to force him into undue haste.

I may appeal to other facts in support of my general opinion. It is not pretended that the appointment of a stipendiary, diminishes the number of persons sent for trial and acquitted at Quarter Sessions. Again; anyone who watches the proceedings of the London Police Courts, is rather struck with the carelessness and want of dignity in their proceedings; and will hardly believe that they, in their hurried way, are more to be trusted than an ordinary Court of Petty Sessions, where an abundance of time can be taken to sift every case. In France again, the paid magistrates send for trial more persons who are acquitted, than are sent by the English Petty Sessions: our acquittals throughout the country being under 25 per cent. of the accused,⁽⁴⁰⁾ while French acquittals are fully 25 per cent., and have been very much higher.⁽⁴¹⁾

Without making any comparison of the general merits of unpaid and paid magistrates, we may conclude that an innocent man has no superior safety in the hands of the paid magistrate; and that therefore, the appointment of stipendaries through the country generally, whether useful or not on the whole, would not correct the great evil of frequent committals of innocent persons.

As regards the Quarter Sessions, and the Assize Courts, some persons believe that it would be a great improvement of procedure if the prisoner was examined as a witness. The experiment will probably be tried: I do not believe it will much hinder unjust convictions.

What then remains? It is difficult to say. I would however, make one suggestion: that at present

our trials are too much hurried. At assize-time, the judges set off on their circuits, and are expected to get through their work by about a given day : they cannot possibly remain in one town an additional week, and cannot well spare even a day. Now if anyone has in hand a matter of importance; a matter of far less importance than one involving the life or ignominious death of a human being; he always shrinks from deciding on it at once: he "takes a night to sleep upon it:" he knows by experience that his decision to-day and his decision to-morrow and his decision a week hence, will probably be different, perhaps contrary. But the judge and jury must make up their minds at once.

Again; when a trial is reported and generally read, new evidence may turn up. In the trial of Courvoisier, the Swiss valet who in May, 1840, murdered Lord William Russell; at the end of the first day the case was incomplete enough to allow Mr. Phillips to contend in defence, that though the women servants were acknowledged to be innocent, the evidence really pointed at them nearly as much as at the valet. The report of the previous proceeding had been read in the newspapers; and on the second day, a witness appeared with Lord William Russell's stolen plate, and swore that Courvoisier was the man who had put it in her possession. The delay and publicity completed the case.⁽⁴²⁾

In this instance, it was not an accused person proved to be innocent, but an accused person proved to be guilty: another time however, it might be the former. It happened also, that the incident put an end to a possible suspicion against several innocent

persons: for Courvoisier's counsel had been misinterpreted to say that it was one of the women servants, and not his client, who was probably guilty. Anyhow, the delay and the additional evidence, had secured the due administration of justice: had convicted the guilty man, and had removed the taint of suspicion from the innocent women.

Under our present judicial organization, it would not be possible to delay the conclusion of a trial; and especially at Assizes, where the judge has to get through his circuit in about a given time; and therefore to pass from one town to another with a near approach to regularity. There is a notion afloat however, that this organization is likely to be superseded by another; under which the country will be divided into districts, each with its local centre: it may be possible, if this alteration should be carried out, to abandon the rule that a trial should be concluded as soon as the evidence has been heard: we may hereafter see a trial postponed for a week or a month, to give time to search for additional evidence on either side.

It is true that this is impossible, so long as we insist that the same jury shall hear the whole case: for we could not lock up a jury for a week or a month, with nothing to do: this would be worse than the New York practice of imprisoning witnesses to secure their attendance at a trial: a practice which necessity alone can justify. On the other hand it would be intolerable to disperse a jury with notice that further attendance would be required in a week or a month. How much room for undue influence with some weak member of the twelve! or at any rate for suspicion of such influence!

But after all the changes we have seen, we may believe that a case may hereafter be submitted to two juries in succession. This is sometimes virtually done now ; as when a prisoner, acquitted on a capital charge, is tried on a minor charge : but here the two trials are distinct ; the witnesses being all produced on the second just as if the first had not taken place. Is this absolutely necessary ? Can we not conceive a postponed trial opening with the reading by the judge of the notes of the former hearing, together with a statement of the grounds of postponement, and followed by an invitation to the prosecution and to the defence to produce further evidence for the elucidation of the obscure points ? All this, done publicly, and subject to the comments and remonstrances of counsel on both sides, might perhaps save us from those frequent false convictions which hang like a nightmare over our present administration.

We may learn a lesson from the French, who give vast pains and ungrudged time to discover the truth. I do not by any means intend to approve of their modes of proceeding : I only admire their persistent labour ; and I am disposed to hope that if our judicial impartiality and greater tenderness towards the accused, were backed up by French patience, we might avoid those blots which now humiliate us.

We are familiar enough with the French procedure ; but let us look at it once more in the notorious case of Traupmann, the wholesale murderer, the rival of the Ratcliff-Highway butcher. The repeated examination of an accused person, previously to trial, is thus described by a French paper.⁽⁴³⁾

"This interrogation is the terror of the guilty. It is an agony that is daily repeated—a moral torture which has succeeded the actual rack without its apparatus of torment. When that monstrous system of physical suffering came to help the moral, it was perhaps easier to keep silence than it is in the present day. Bones cracked in the boot, the joints were dislocated on the rack, but it was only necessary to keep silence. Now one must speak and yet say nothing. 'I shall say nothing, they will know nothing,' this is Tropmann's leading idea. He has turned it over and over in his mind, and ever comes back to that phrase which he murmurs to himself like the cadence of a tune, 'I shall say nothing, they will know nothing.' Yesterday, as the day before yesterday, he had promised himself that he would say nothing, and yet he saw the judge reflect after he had uttered some insignificant words, and the clerk wrote to his dictation. Again he determines that to-day shall be as yesterday, and to-morrow as to-day. 'They shall know nothing; I shall say nothing.' Then Tropmann begins by refusing to answer, then comes to yes and no; and at last, carried away by the wish to defend himself, relates for the hundredth time the romance of the guilt of Jean Kinck. He stops suddenly; has his memory been faithful? Has he not been betrayed into some slight variation? Yes; he had said such and such a thing which did not figure in his previous accounts. His tongue cleaves to the roof of his mouth—he is at the last gasp. 'Write that down, clerk,' and the pen scratches again on the paper. A few minutes more, and Tropmann, exhausted, is given back into the hands of his warders. The judge knows something more. The accused knows nothing."

All this moral torture appears to us monstrous: still more amazing seems the subsequent information⁽⁴⁴⁾ that "Traupmann was examined a first time yesterday afternoon by M. Thévenin, *the judge who will preside* at the second session of the December assizes, when the trial will take place" (Tuesday, 28 Dec., 1869).

The English maintain that such a practice is dangerous to the innocent as well as to the guilty, especially if an innocent man has offered a defence which is not exactly true. You may say that he suffers for his guilty folly of lying: but does a lie at

any time, much more a lie told in the confusion of a serious accusation, deserve the galleys or the guillotine? What extreme injustice may result from the system is shown by the case of Adèle Bernard, recently tried for concealing the birth of her child, and throwing the child to the pigs. *She confessed* the crime, and was sentenced to be imprisoned: a month or two afterwards she was delivered of the child alleged to have been eaten by the pigs.⁽⁴⁴⁾

"It has been suggested that Adèle Bernard is one of those young persons who are not in the habit of saying 'no' to anyone; and seriously, it appears as though, pressed by the interrogatories of the tribunal, she would have declared herself guilty of no matter what crime rather than offend her judges by contradicting them. According to one report, 'she thought it was forbidden to say no.' . . . The Paris correspondent of the *Daily News* attributes the suicidal perjury of the young girl to the advice of her mother, who pointed out to her that 'if she told the truth she would get off easily.' Only she did *not* tell the truth. . . . 'Our magistrates,' says M. Lockroy, writing about this case in the *Figaro*, 'are always inclined to look upon the accused as guilty. Their sole pre-occupation is to obtain an avowal of the crime. And the fear inspired by the judges is such that some persons confess at once rather than displease them.' That is to say, that in place of the obsolete physical torture, moral torture is employed. 'I am sure,' continues M. Lockroy, 'that a magistrate, if he desired it, might extract the strangest confession from a peasant. If the brother of Adèle Bernard had been accused of giving birth to a child, the young man would have made no difficulty about agreeing with the judges that such was the fact.'"

Long may it be before we adopt the practice of terrorism and moral torture to extract confessions! If we resolve to prolong our trials when it seems desirable, the additional time must be given to the search for additional evidence, and not to questioning the prisoner. We already convict many innocent persons: by adopting the French system of interrogation we might convict many more.

NOTES.

- (1) *Rationale of Judicial Evidence*, 1827, 5, 245. *Westminster Review*, 7, 400. Cooper's Bravo.
- (1A) *Stephen's Commentaries*, 1858, Vol. I, 146, note.
- (2) *Romilly's Memoirs*, 1, 79-83: 108-109.
- (3) Dryden, ed. 1811, 1, 220.
- (4) *Pall Mall Gazette*, 24 Feb., 1869, 4.
- (5) *Revue des deux Mondes*, 79, 7.
- (6) *English Bards and Scotch Reviewers*.
- (7) *Bentham's Works*, Part I, 227.
- (8) *Ib.*, 229.
- (9) *Ib.*, xix, 115.
- (10) *Edinburgh Review*, 35, 286.
- (11) *Repression of Crime*, 105.
- (12) *Merchant of Venice*, ii, 5.
- (13) *Clay, Prison Chaplain*, 11.
- (14) *Paley, Of Crimes and Punishments*, ed. 1825, 340.
- (15) *Romilly's Memoirs*, 1, 89.
- (16) *Ib.*, 2, 247.
- (17) *Ib.*, 2, 230.
- (18) *Ib.*, 2, 237.
- (19) *Ib.*, 2, 243.
- (20) *Ib.*, 2, 252.
- (21) *Ib.*, 2, 282-3 and 303.
- (22) *Ib.*, 2, 305, note.
- (23) *Ib.*, 2, 315.
- (23A) *Windham's Speeches by Amyot*, 1812, I. 111 and 136.
- (24) *Romilly's Memoirs*, 2, 318: 325, 383, 390.
- (25) *Ib.*, 3, 79.
- (26) *Ib.*, 3, 219, 242, 238.
- (27) *Ib.*, 3, 260.
- (28) *Ib.*, 3, 331, 334, 337.
- (29) *Carlyle*, 450.
- (29A) *Bentham, Rat. Jud. Ev.*, 1827, 5, 640, note.
- (30) *Daily News*, Dec. 5, 1868. *Pall Mall Gaz.*, Dec. 24, 1868.
- (31) *Romilly's Memoirs*, 3, 235.
- (32) *Toulmin Smith's Parliamentary Remembrancer*, 169, page 166: 184, 76: 191, 119. *Report of Select Committee of House of Commons*, (395), 17 June, 1864.
- (32A) For Barber's case, see *Irving's Annals*, 1869, 68, 305, 367.

- (33) Pall Mall Gaz., 6 Oct., 1866: 11 Dec., 1866: 27 Feb., 1867:
25 Sept., 1867: 24 Dec., 1867: 8 May, 1868: 10 Feb., 1869:
13 Feb., 1869.
- (34) Economist, 1263: Pall Mall Gaz., 13 Nov., 1867.
- (35) Spectator, 1911, 145: 1914, 233: 1917, 316. Parliamentary
Remembrancer, 207, 40. Times, 17 April, 1865.
- (36) Pall Mall Gaz., 23 April, 1869.
- (37) Ib., 19 June, 1869.
- (38) De Maistre, Soirées de St. Pétersbourg, 1, 44.
- (39) Social Science Transactions, 1869, 192.
- (40) Birmingham Journal, 20 April, 1867.
- (41) Journal des Économistes, July, 1867, 71.
- (42) Annual Register, for 1840, 229.
- (43) Pall Mall Gaz., 16 Oct., 1869, and 14 Dec., 1869.
- (44) Ib., 5 Feb., 1869.

Essay II.

LIES OF STATISTICS.

I.

MANY years ago, long before I had paid any particular attention to Statistics, I casually read a paragraph which startled me: an Anglican clergyman in a great Lancashire town, remarked with some fervour, that of all the recent borough convicts, not one was a member of the Church of England. The obvious inference was that the teaching and discipline of the Church were unfailing preventives of gross misconduct.

As it had been my good fortune to grow up under the teaching and discipline of the Church, I supposed myself capable of estimating the moral prophylactics she furnished; I doubted whether these were so efficacious as to secure immunity from crime.

As I revolved the question, it occurred to me that among the recent borough convicts, not only was

there no Anglican, but there was no Inghamite, no New Churchman, no Testimony Congregational Churchman; no member of the Hallelujah Band, or of the Wesleyan Reform Glory Band, or of the "Christians who object to be otherwise designated," or of the "Protestants adhering to articles of the Church of England 1 to 18 inclusive, but rejecting order and ritual."⁽¹⁾ Why should not these and the fourscore more certified sects claim a share in the credit of the Church for preventing crime?

Allowing my thoughts to wander from China to Peru, I was forced to admit, that among these borough convicts there was not an Hindoo, nor a Buddhist, nor a follower of Confucius.

Had I ventured to make such observations to the clerical writer of the paragraph, I should have been rebuked for my flippancy: I should have been contemptuously asked how English sects, so scant in members, though sesquipedalian in name, could supply criminals; and how the celestial or infernal Asiatic religions could furnish prisoners, in a town where Chinamen and Hindoo were almost unknown. Yet this train of thought conducted me to a doubt which was perhaps well founded.

There is no Hindoo or Buddhist in the gaol; you explain this fact by the absence of an Asiatic population: there is no churchman in the gaol; if I ask whether this fact is somehow connected with a paucity of churchmen, I am told to count the steeples and listen to the Sunday chimes. I am rebuked, yet I venture on other questions; whether the steeples point to heaven for all classes of society or only for one; whether the Sunday chimes are

listened to by all classes or only by one. I know that in other great towns, the Church has lost its hold over a large part of the people: that the middle classes are often dissenters, and the lower classes more often altogether negligent of divine worship. You say that there is no churchman under sentence: may this be only another way of saying that the convicts belong to the lowest classes?

Now it is true everywhere that prosecuted crime is very much a matter of class. From the throne to the hovel, at each descent prosecutions increase. Among the upper strata there is more idleness and more vice, but accompanied by such a nervous fear of public opinion, and such a dread of damaging the family and the class, that offences are hushed up and scandals are avoided. Among all the affluent classes, a fraud committed by a youth is generally arranged as a debt; and the illegal practice of compounding a felony, is an everyday occurrence. An employer robbed by a workman, prosecutes: robbed by a young clerk, he gets the debt paid. Among persons brought up to a competency, temptations are fewer, dread of the law and of public opinion is stronger, means of compounding are more plentiful. It is the same with assaults, whether on men or women: the more refined classes generally refrain from violence; and if they are guilty of it, they or their friends have the means of bribing the injured person; who feels that however irreparable the damage may be, a judge and jury cannot restore the amputated limb or the lost honour.

Our registers show that few educated persons are convicted. I have before me the Calendar of the

Birmingham Quarter Sessions, for April, 1869 :
 number of prisoners, 111 : of superior education, 0.
 I have also the Summary Tables for England in
 1865 : committals, 126,000 :
 of superior education, males, 193, females, 7 = 200.
 Thus out of every 1,000 committals, there are 2
 well-educated persons, to ill-educated, 998.

If then, we found that at the Manchester Quarter Sessions, no churchman was convicted, some might attribute the immunity to the excellent teaching of the Church: others might draw a different inference; they might say that as nearly all known criminals come from the uneducated classes, and as there were no churchmen among these particular criminals, it followed that the Birmingham uneducated classes were not churchmen.

Quite recently, it has been declared that in England, the Roman Catholics number 5 per cent. of the population, and furnish 20 per cent. of the inmates of gaols. The Roman Catholics themselves claim $7\frac{1}{2}$ per cent. of the English population: but even if they had 10 per cent., that would leave them with double their due proportion of gaol-birds.

Let not the zealous Protestant rejoice overmuch: let him not look up to heaven and thank God that his co-religionists are not like those publicans of Papists. Crime is a matter of class; committals and prosecutions are still more a matter of class: the Roman Catholics in England are to a large extent, unskilled labourers, immigrants from Ireland; of the very class which produces most of our convicts: the gaol-birds abound amongst Roman Catholics, not because they are Roman Catholics,

but because these are in England for the most part of the lowest social class.

These ever-recurring fallacies explain the saying, once the apothegm of a wit, now a hackneyed proverb, that nothing is so false as figures unless it be facts. The statistician may bear the sarcasm with equanimity; since after all it places facts even below figures, and yet no one has proposed to abandon the study of the facts, either of science or of history; and no one has ventured to affirm that all science is quackery and all history is an old almanack. Facts, so called, are often false; yet we think it worth while to sift, arrange, and record them: figures are false in a less degree (so says the wit); let us sift, arrange, and record them.

But whatever comfort may be derived from this consideration, there remains the painful recollection of the tricks played by men ignorant of the statistical art, or wilfully bent on making out a case, by throwing a cloud of figures in the eyes of the world. A practised inquirer is no more ready to accept implicitly the figures presented by an enthusiast or a partisan, than to appoint an agent on a friendly testimonial, or to condemn a prisoner on an examination in chief. *Audi alteram partem*, is in all cases his maxim.

II.

STATISTICAL errors are of various kinds, of which the most obvious is mis-statement of numbers. Dr. Price sinned grossly in this way, though not wilfully, when he maintained that the

Mis-state-
ments of
numbers.
Population.

population of England was steadily diminishing. For Goldsmith to adopt the blunder was natural; and we may pardon the poet while we censure the philosopher.

The lapse of time has lessened the probability of such mistakes. We are not likely now to go astray with "an ingenious engineer," who, in 1817, on the opening of the Gibson branch of a Birmingham canal, declared its level to be "3,000 feet above that of the Thames at London." The height of Birmingham above the sea is really considerable: with this peculiarity, that though it has no hill, the highest point in the borough is 616 feet above the sea, the lowest is only 288:⁽²⁾ and Gibson's canal being neither at the top nor the bottom of the slope, has between a fifth and a tenth of the altitude assigned to it by the ingenious engineer.

Height above
the sea.

The facts of agriculture have long been a favourite topic for estimates. Thirty to forty years ago, many figures were published by Mr. M'Culloch, an able statistician, whatever may have been his merits as a political economist. He concluded that the area under corn crops of all sorts was $11\frac{1}{2}$ million acres; late returns, collected by authority, prove that the area at present is about $11\frac{1}{2}$ millions: all things considered, Mr. M'Culloch must have been very near the mark. He also calculated that the average wheat harvest of the three kingdoms amounted to about 13 million quarters: this is pretty nearly the average harvest at present; and making the necessary allowances for the results of improved farming and of free importations, it is probable that Mr. M'Culloch's calculation nearly reached the truth. It was certainly far more accurate than that of Sir

Agriculture:
M'Culloch.

Robert Peel; who in the cornlaw debates increased the estimated quantity by nearly one-half.

Live Stock.

Other writers pretended to know the numbers of cattle, sheep, and pigs in existence. They set them down as twice the present ascertained numbers: a preposterous blunder.

Vital
Statistics:
Montreal.

Within the last few years, there have been some singular examples of errors committed by authority. Dr. Philip P. Carpenter tells us that in the City of Montreal, returns are alleged to have been made with much care: yet that, while there were 3,000 burials, only about 2,000 deaths were registered.

England and
Scotland.

We shall not wonder at this, when we look at something much nearer to us. A general registration of Births, Marriages, and Deaths, is rather recent in England; having been established little more than thirty years: in Scotland it was begun later, and in Ireland later still. There is little doubt that the English registration of births was very imperfect for some years after it was begun, and is still imperfect in a less degree: even the deaths at first were probably not all recorded. The same may be said of Scotland.

Ireland:
registration.

Much more serious irregularities, however appear in the Irish register; unless we accept as a true result the calculation that the death-rate of Ireland is only two-thirds that of England. In a particular quarter of 1868, I find the recorded death-rate of Ireland only half that of England; and at Somerset House so strong is the disbelief of the numbers given for 1866, that the Registrar General⁽³⁾ has

added one-fourth to the deaths and one-third to the marriages and births. Whether it would not have been wiser to decline altogether the use of inaccurate tables, is a matter to be discussed under the head of Conjectural Statistics.

Ireland is a distracted country, with a tendency to go wrong in every direction. The Government is far more centralized than ours; with a complete organization in its constabulary and poor-law officers. On the other hand, the peasantry and the priests, inimical to the authorities, would rather thwart than aid their efforts: the population is scattered; and who would care to give information of birth or marriage or death, in the wilds of Connemara or Tipperary?

If it were only the deaths which appeared unnaturally few, our doubts would have less justification: for before the registration was instituted, we were told on authority that the people were healthy. They live mostly in the country; and the absence of great towns (the sepulchres of infants), of course reduces the average national death-rate. The potato, the staple food, though unfavourable to sustained labour, and injurious to the stomach by its bulk, contains the elements necessary to health: and Dr. E. Smith has pointed out that low as are the weekly gains, these are mostly spent on food, by a people who pay little house-rent, and whose upper and lower extremities have no clothing, while rags are deemed enough for the parts between. It was a surprise to find the rural Scotch, notwithstanding a damp and cold climate, crowding and dirt, and addiction to whiskey, longer lived than the rural

English: it would have been a greater surprise to find the rural Scotch surpassed by the rural Irish, in spite of greater damp, greater crowding, greater dirt, with the additions of aggravated poverty and far less intelligence.

But when we look at the other branches of the register, we suspect that the whole document is untrustworthy. For it tells us that in proportion to the population, the births in Ireland are only three-fourths those of England: and that the marriages are only three-fifths, that is, not a great deal more than half. Great as the emigration has been during twenty years, it can scarcely account for such rates among people whose wages, though low, have steadily risen. We ought, I think, for the present, to put the registers aside, and refuse them all authority.

Apparent
Errors :
Imports and
Exports.

Besides these real errors, there are apparent ones of such magnitude, as at first sight to shake our belief in all public accounts. A considerable trade is carried on between England and France: each country publishes the "real value" of the goods exported and imported. Our goods exported to France are the very goods imported by France: therefore, their "real value" as imports ought to be nearly the same as our "real value" as exports. Speaking exactly, the French account should be greater by port dues, freight, and other charges of transport.

Now a few years ago, a comparison was made by an expert, Mr. J. A. Messenger⁽⁴⁾ of the London

Custom House. The figures for 1858 are as follow :

		Millions £.
Commodities sent from England to France :		
By French account,	14	$\frac{3}{4}$
By English account,	9	$\frac{1}{4}$
Excess of French account,	5	$\frac{1}{2}$
Sent from France to England :		
By French account,	23	
By English account,	13	
Excess of French account,	10	

As the French accounts are in both instances greater than ours by more than one-half, a very insular person might conjecture that Jean Crapaud had cooked them, to exaggerate the French commerce. If they had been of a later date, a fanatical free-trader might twist them into an attempt to attack or support the commercial treaty with England.

But let us look at Belgium in the same year under Leopold the Wise.

Commodities sent from England to Belgium :		
By Belgian account,	4	$\frac{3}{4}$
By English account,	4	$\frac{1}{4}$
Excess of Belgian account,	$\frac{1}{2}$	
Commodities sent from Belgium to England :		
By Belgian account,	4	
By English account,	3	
Excess of Belgian account,	1	

These differences are much less than those between England and France: they cannot, however, be accounted for by the addition of transport charges,

as in both exports and imports the Belgian accounts are the higher.

Since France and Belgium agree in apparent exaggeration, let us see their accounts between each other.

	Millions £.
Commodities sent from France to Belgium :	
French account,	7 $\frac{1}{2}$
Belgian account,	9 $\frac{1}{2}$
Excess of Belgian account,	<u>2</u>
Commodities sent from Belgium to France :	
French account,	7 $\frac{3}{4}$
Belgian account,	9 $\frac{1}{4}$
Excess of Belgian account,	<u>1$\frac{1}{2}$</u>

By this last comparison, the apparent exaggeration was on the side of Leopold and his servants; not on the side of Louis Napoleon as in the case of England and France.

SUMMARY.

	Exports.	Imports.
Between England and France :		
French account	greater by $\frac{1}{2}$	greater by $\frac{3}{4}$ ths.
Between England and Belgium :		
Belgian account	greater by $\frac{1}{8}$ th	greater by $\frac{1}{3}$ d.
Between France and Belgium :		
Belgian account	greater by $\frac{1}{4}$ th	greater by $\frac{1}{8}$ th.

The French exceed us greatly: the Belgians exceed moderately both us and the French.

Explanations:
England and
France.

Mr. Messenger offers us some explanations. As regards England and France, our account is confined to commodities imported into the United Kingdom: the French add to their account their exports to our Channel Islands, as well as to Gibraltar, Malta, and

the Ionian Islands. Besides; many commodities are sent here for transshipment; they touch our coast but do not enter into our consumption: these are included in the French accounts, but not in ours. So with reference to exports; the French account includes quantities of raw silk which comes from the East into Egypt, and which nominally passes through our dependency, Malta.

This explanation is sufficient to show the kind of difference between the international accounts: further particulars will be found in Mr. Messenger's article (*Stat. Jour.* xxiv. 229). We must regret that the two Customs' Departments do not agree upon uniform accounts, so as to check each other, and communicate valuable truth: we may however, dismiss all notions of intentional exaggerations.

In the face of these varying accounts, we must feel doubtful what is the amount of our commerce with any one country; and the uncertainty is increased by ambiguities lately remarked upon in the *Pall Mall Gazette*.⁽⁵⁾ Other ambiguities.

According to the Board of Trade Returns, little Holland. Holland takes our commodities to the value of 10 millions £ a year: it is conjectured that 2 millions £ would cover her consumption of them. The other 8 millions £ is the value of what we send to Rotterdam to be forwarded up the Rhine for North Germany and even for Austria. It follows that our exports for Dutch consumption are only one-fifth of what they appear; and that those for North Germany and Austria are 8 millions £ greater than they appear.

There is less ambiguity when the commodities are

recorded as shipped to a port; because it would be conjectured that in many cases they were sent for transshipment. We cannot be surprised to find that Hamburg receives large consignments for Russia, Poland, Austria, and Roumania. On the other hand, in estimating our commerce with Russia and Germany, we may easily forget to add to our registered exports, those which reach those countries indirectly.

Hamburg,
Russia, &c.

Relative
foreign
commerce.

What then, are we to believe as to the relative importance of our commerce with this foreign nation and that, disregarding our colonies? We are told that probably the Germans (including the Austrians), are the greatest consumers of our commodities: that the Americans come second; the French third; the Turks fourth; and then in a ruck, the people of Russia, Austria, Italy, Egypt, Brazil, and China.

Boundaries
of towns by
Registrar-
General.

Strange misapprehensions are caused by the arbitrary use of names, and negligence of natural boundaries. We find in the Registrar-General's reports, Bristol represented as containing in 1861, only 66,000

souls, whereas it contained by the Census, 150,000: Bradford is reduced from 196 to 106 thousand: Liverpool, Manchester, and Birmingham all appear far below their natural dimensions. On the other hand, Bolton rises from 63 to 120 thousand: Gateshead and Chester from about 30 to 59; Oldham from 72 to 111; Wolverhampton from 61 to 127 thousand. To save trouble, the poor law boundaries were originally taken, to the great confusion of all inquiries about results.

In some instances names are so confounded as to make returns useless. In 1855, Mr. David Buxton⁽⁶⁾ showed that the Deaf and Dumb Asylums were so strangely designated in the Government return of 1851, that their best friends could not recognize them. The *London* Asylum appeared as St. George, Southwark; the *Manchester* as Barton-upon-Irwell; the *Birmingham* as King's Norton; the *Exeter* as St. Thomas: each asylum appearing in the name of its Poor Law Union. Names
miscalled.

There were other misrepresentations: thus we were told that the first English asylum was founded in 1821, whereas the London one dates from 1792, and the Birmingham one from 1812. Again, says Mr. Buxton; these two, the oldest in England, and other more recent ones, are not mentioned at all in the returns, though they appear in the Supplementary Tables.

It might perhaps be expected that numerous and serious mistakes would occur in the calculations of averages and per-centages. I have no reason to suppose that this is the case in documents issued by government: these generally err in the data and not in the results; in the materials and not in the workmanship. Calculations
by
government;
correct:

But calculations made by private persons should always be carefully revised by the reader. An example offers itself, in the question of house accommodation in different places. Mr. Cheshire, in an excellent tabulated abridgement of the Census of 1851, stated correctly that a large proportion of the by private
persons;
incorrect.
Houses.

families of the midland counties, had each a separate house: but he excepted those of Bristol, Clifton, Gloucester, Hereford, and Birmingham. Of Bristol and Gloucester I say nothing: Clifton is a place in which so many servants are kept, that the average households are unusually large, and the ordinary proportions are disturbed. Hereford, far from being an exception, had a house to every 5 persons, a singularly liberal accommodation. Birmingham too, was for a large town, well supplied, having a house for little more than 5 persons (5·07); while Manchester had only one for 6 persons, Bristol one for $6\frac{1}{2}$, Liverpool one for 7, Plymouth one house for 10 persons.

Bradford :
population.

These errors were committed by one writing in his private capacity, and probably with no one at command to revise his figures. I will now mention a case of a more public nature. In 1858-9, the leading inhabitants of Bradford, found it necessary to estimate the population of the town; first, with reference to certain parliamentary proceedings, and afterwards for supplying local information to the Social Science Association⁽⁷⁾ at its meeting in the town. The inquiries and calculations made the numbers amount to about . . . 130,000. In 1861, two years later, the Census made the numbers . . . 106,000, or nearly one-fifth fewer than was expected. So remarkable a difference led to further investigation; but the result proved the comparative accuracy of the Census: the local estimate of persons having been too high by nearly . . . one-fifth, the Census enumeration of houses having been too

low by only one-fiftieth.
I suspect also that the number of persons to each
house was greater than the one given, which was }
only 4·72, }
about that of rural districts: while that of most
other large towns was far higher, going up even to }
7·28.

If each house contained 5 persons instead of 4.72, the amended enumeration would be
 22,895 houses at 5 to each = . . . 114,475,
 which would make the Census deficient by 8,475,
 or about one-thirteenth.

I must remark however, that this comparatively small defect of one-fiftieth, or one thirteenth, is sufficient to support my argument in a later part of this paper, as to the inaccuracy of the Census generally.

I think that fairness to the Bradford authorities⁽⁸⁾ requires me to copy the apology they offered for their over-estimate.

“It is apparent from the above that the over-estimate of the population has arisen from three causes :—

"1st. In assuming that the number of persons in each house would be the same in 1861 as in 1851.

"2nd. In assuming the increase of houses to be equal to the number for which plans are approved, with a reduction of 10 per cent. for houses not built and old buildings displaced and discontinued for habitation.

"3rd. In assuming the number of unoccupied houses to be no greater in 1861 than in 1851.

If the Bradford authorities found it necessary again to estimate their population, they would doubtless feel less confidence in Conjectural Statistics.

It is to the credit of Mr. Winder, who was making educational inquiries in the north,⁽⁹⁾ that before the

census was taken he expressed his disbelief in the local estimate of 130,000.

Manchester
Physician:
unfounded
attack on
sanitary
opinions.

I will mention one more simple blunder; made by a Manchester physician, who trusted, no doubt, to his own researches, unchecked by an independent examiner. The mistake was the more unfortunate, because on the false result was founded an opinion in direct contradiction to that of other sanitary students. Of the propositions deduced from the public returns, one of the best established is this: that the great manufacturing towns are more unhealthy than the small country towns: this was now disputed on the strength of calculations made from the figures of the Registrar General.

True, said the pamphlet, the rate of mortality is much higher in great towns than in rural parishes; but the rate in certain small towns is higher still. Examples are given.

RATES OF MORTALITY.

IN GREAT TOWNS.		IN SMALL TOWNS.	
Stockport	27	Bedford	30
Manchester	28	Huntingdon	31
Ashton	28	Dorchester	31
Sheffield	31	Ely	33

It happened unfortunately for the author, that these striking results became a newspaper topic; and that the public attention was so much aroused that a second and a third edition of the pamphlet were called for. A copy of this last was sent me by a friend who knew that I was at work on the same

topic. The alleged death-rates of the small towns amazed me, because they contradicted results which had cost me months of labour: I made fresh calculations, and found myself still at utter variance with the pamphlet; as for example:—

Death-rate of Ely,	by the pamphlet	33,	by myself	22
„	Huntingdon	„	31,	„ 20
„	Bedford	„	30,	„ 21½

I took the liberty of writing to the author, whose name appeared on the title page, and I gave him the figures of one or two of my calculations. After some delay and a brief correspondence, he confessed that his figures were wrong, and therefore, that his argument was baseless. The pamphlet was withdrawn from circulation. No doubt, I thus unwillingly inflicted severe mortification on the author, a man of much medical experience and greatly respected. He had trusted to his own investigation, and had not got his figures checked by a competent authority.

I have spoken with high respect of the author of this pamphlet, and I have done so deliberately: nor was my esteem for him as a physician lowered by the exposure of his miscalculations. I shall shortly have to point out a remarkable mistake, though a more venial one, of another Manchester physician. I think it right to protest that my esteem for the faculty is not lessened by these errors. Where many men take up a topic of great difficulty, for treating which their education has not prepared them, blunders are inevitable. Liverpool, as far as I know, has escaped these humiliations: but Liverpool has no Statistical Society, while Manchester has

Apology for
blunders.

the oldest society in England, and the only considerable one out of London. Where there are no searchers there will be no mare's nests. It is no credit to the Anglo-Saxons or the native Irish, that they never miscalculated their death-rates: any modern discovery of such miscalculations on their part, would greatly raise our estimate of their civilization. If we believe that the Druids invented reaping machines, we admire their premature ingenuity, notwithstanding imperfections of construction. Liverpool may crow over Manchester blunders: Manchester may with greater justice condemn Liverpool indifference.

Averages.

But besides inaccurate enumerations, perplexing differences among international trade accounts, misstatement of names, and miscalculations by individual inquirers, there are frequent fallacies in the practice of striking averages.

Quetelet.

M. Quetelet, in his *Letters on the Theory of Probabilities*, explained the principles which ought to guide us. He devoted his Second Part, beginning with Letter X, to averages and limits. I find his reasoning summed up elsewhere.

Two kinds
of averages.

He points out that an average may indicate two different things. If you measure Nelson's monument ten times, and always with a slightly different result, adding the measurements together and dividing the sum by ten, the quotient is an average or mean. You may afterwards accurately measure the Duke of York's pillar, the Parisian obelisk, and the column of the Place Vendôme, and after adding together

the three heights and dividing the sum by three, you may declare the quotient to be the average or mean height of those monuments.

M. Quetelet contends that these results are of such different significance, that they require two separate names: he would limit the term average or mean to cases represented by the repeated admeasurements of one monument: he would apply the term *arithmetical* mean to cases represented by the admeasurements of a number of monuments. The repeated measurings of the one, result in a mean approximation to something *actually existing*: the measurings and calculations having reference to a number of monuments, result in no knowledge of anything existing: they only indicate a *relation* among actual existences.^(9A)

Average and
arithmetical
mean.

M. Quetelet applies this distinction to Life Tables. He says that when we speak of the average duration of life, we throw together adults and infants, males and females; and that the arithmetical mean does not represent anything in nature. The neglect of this consideration has in fact led to strange consequences. In a Foundling Hospital, where the infants were admitted at birth and were drafted off at five years old, the average age at death would be far less than five years: in an almshouse where no inmate was admitted under sixty, the average age at death would be far above sixty. If the average age at death were twenty times as high in the one case as in the other, that would prove nothing as to their relative salubrity.

Applied to
Vital
Statistics.

Yet formerly, the average age at death was taken as a test of salubrity. A large proportion of old

Fallacy :
mean age at
death.

deaths in a town was regarded as a proof of healthiness: with an entire disregard of the fact, that in a decaying or stationary place the young people migrate, and therefore die elsewhere; and that in a fast increasing place the immigrants have not generally had time to grow old. A certain suburb was pronounced unhealthy, because the mean age at death was low, but a sceptical inquirer found that the suburb was mostly peopled by young couples and their children; and that the mean age at death was low because the mean age of the living was low: besides that young children furnish more deaths than do adults.

Medical
calculations.

The principles of averages and arithmetical means as applicable to medical inquiries, were learnedly discussed some ten years ago in a paper by Professor Radicke of Bonn; and a translation by Dr. Bond will be found among the publications of the New Sydenham Society for 1861 (vol. xi). Professor Radicke shows the futility of inferences drawn from the mean of a short series of observations, often disparate, and begun and ended arbitrarily; and where the addition or excision of a single term of the series, will greatly change the result.

In elemen-
tary
education.

A careless use of averages, has led to what I think too low an estimate of our efforts to instruct the labouring classes. That much is wanting, and especially in the very lowest strata, is too true. But I protest against exaggeration. At all times, a departure from truth is inexpedient as well as wrong: and the evil which follows misrepresentation lies in this case on the surface; for to zealous and constant labourers it is most discouraging to be told

that nothing has been done; which is as much as saying that all their efforts have been wasted. Let younger labourers, entering on the field, do justice to their predecessors, who first broke up the obstinate ground, and left a popular and easy task to the present generation.

The first fallacy has reference to the number of children under education. In the Privy Council Report for 1869, I find that in 1868, the number presented for inspection was . . . 1,284,778. We are told that these figures teach us nothing as to the number under education, since each manager, by means of a whip, can make a show on a field-day. Granted. But now comes the fallacy. I am referred to another line in the same page: "Average number attending, 1,033,675," which gives a quarter of a million less than the line quoted before. We are told that this million, and not a million and a quarter, is the number under education.

Number
being
educated.

Go to a middle-class school, where the parents pay fees, and of course pay for no boy who is not under instruction. Suppose fees paid for . . . 200. Now, what will be the average attendance? Two hundred? Certainly not. The average attendance will vary, comparing one school with another, according to the boys' ages, the distance they have to come, the eagerness of the parents, the severity or laxity of the school discipline; the average attendance may be 190, 180, 150. Still I should say that all the 200 are being educated: for a boy who through ill health is absent half his time, will in the end get an ordinary education; and

Compare a
middle-class
school.

another, who is absent a fourth of his time may do tolerably well.

But the lower you get in society, the greater will be the irregularity; partly from necessity, partly from parental carelessness. As to necessity: there are many families in which for a time the school pence cannot be found; many in which any illness of the mother compels her to keep the eldest child of either sex at home to act as a servant: a state of things described by thoughtless educationists as one in which the child is neither at school or at work; as though looking after the household for a sick mother were a rather immoral waste of time. As to carelessness: many ignorant persons think it right that their little ones should have a certain quantity of schooling, without troubling themselves about results; and they will send the children from school to school, or keep them away for the week on trifling excuses: valuing instruction so little that if a child has been accidentally kept at home on a Monday, they will decline to pay the school pence for the remaining four days, and so the school week is lost. It may be said that such children are not under education: I answer that they are under such education as we can give them; since even with a compulsory system, a good deal must be left to the parents.

Suppose now, a boy is at school 5 days a week (Saturday is a whole holiday): but through his own illness, or that of his mother, he is absent a fifth of the year: he is certainly under instruction. Suppose four other boys also absent a fifth of the year from this or other causes. You have five boys under

instruction. But the five boys' attendances would only make up an average full attendance of four boys, and would only count as four according to the vicious mode I am condemning. Under the Government regulations before the Revised Code, when schools were assisted according to the numbers attending and not according to the results of the teaching, four days a week were counted as a regulation attendance; and the five boys I have mentioned above would have been taken as 5, not as 4.

I repeat the figures I started with. Children presented for inspection . . . over $1\frac{1}{4}$ millions; average number attending school, over 1 million. I conclude that the number under instruction was nearer the $1\frac{1}{4}$ millions than the 1 million.

Another educational fallacy, which this is not the place to enlarge on, is the requiring us to have at school all children of school age. As to what this age is there are differences of opinion. I am unwilling that my own children should even be taught their letters before they are five years old: but in the class where there are no servants and no playground but the court or the street, it is probably advantageous to young children to have the mild discipline and the modicum of instruction administered by an infant school. In the country however, it cannot be said to be necessary that children should begin before five. The unthinking zeal of raw educationists sets down as of school age, all between 3 and 13: that is nearly a fourth of the population; and would require that this fourth should always be at school. To be sure, the Royal Commissioners pronounced that a sixth of the population under

Should all
of school
age be at
school?

instruction would satisfy reasonable persons: but unfledged enthusiasm is unreasonable, and makes light of royal commissions. The Prussian proportion is a sixth; and if the United States surpass this, it is because they have two sets of schools, the summer and the winter; and reckon as under instruction, all who attend the summer schools plus all who attend the winter schools, without inquiring curiously as to those who attend both: a practice in direct defiance of our attempt at determining the numbers by average attendance through the whole year.

The over-zealous educationists then, demand that all children between 3 and 13 should be at school: they require every child to be at school 10 years. However large the family, however poor the parents, however sickly the mother, all the children of school age are to go to school, leaving the mother to struggle through the day, and requiring the father, in work or out of work, in sickness or in health, to provide food, clothing, and house room. Folly could scarcely go further than such requirements. Happily, the legislature in prescribing a half-time system, is wiser than the zealots.

Short series: I see it maintained on the strength of an article
Dr. Guy. by Dr. Guy, an excellent authority certainly, that a short but accurate series is quite trustworthy. After reading this and other articles by Dr. Guy, in the *London Statistical Journal*, I arrive at the conclusion that a short and accurate series is far preferable to a long and careless one; but that among accurate

series the long one carries more authority than the short one. Accuracy first, and extent second.

Strange results may be arrived at by a careless comparison of averages. For certain purposes, such as the tithe commutation, a declaration may be required every year, of the average price of wheat during the previous ten years.⁽¹⁰⁾ The following are the actual averages of each of 15 years.

Averages of
averages :
wheat.

40/3	38/6	40/9	53/3	72/5	74/8	69/2	56/4
1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.
44/2	43/9	53/3	55/4	56/5	44/9	40/2	
1858.	1859.	1860.	1861.	1862.	1863.	1864.	

The average of the 15 years was 52/2. But let us see what, at the end of the year 1859, was the average of the previous ten years: it was 53/4. In 1860 it was 54/8: in 1861, 56/4; in 1862, 57/9; in 1863, 56/11; in 1864, 53/8. A negligent calculator might take these six averages, and after adding them together and dividing by six, might flatter himself that he thus obtained the average of the 15 years. In fact, as we have seen, the 15 years' average was 52/2,

but the average of averages was 55/5. Indeed every one of the ten years' averages was higher than the real average. The singularity is explained by the fact that the middle terms in the 15 years' series are the highest of the terms, and that these highest terms enter into every one of the 10 years' averages, while the low terms at the extremities enter into only some of them.

A simple series will illustrate this.

a	b	c	d	e	f	g	h	i	k	l	m	n	o	p.
1	2	3	4	5	6	7	8	9	10.	1	2	3	4	5.

The average of the first 10 terms (a to k) is	5·5
„ „ second „ (b to l) is the same	
„ „ last „ (f to p) is the same	
That is, each 10 years' average is	5·5
and the average of averages is	5·5
But the average of the 15 years (a to p) is	4·66

which is less by nearly a fifth.

The explanation is what I gave before: the high numbers 6 to 10 (f to r) enter into every one of the 10 years' series, whereas the low numbers at each end enter into some only.

Banting.

Take another example from a topic suggested by Mr. Banting. Long before I had heard of that gentleman, I had made it one of the labours of my life, to keep myself within a moderate compass; though an unfailing appetite and an indefinite power of assimilating food, had made the task difficult. I may say as the results of careful and continued experiment, that to me the Banting diet means disordered secretions, nausea, rheumatism: and that without that diet I can keep myself at any weight I please by observing a few rules.

1. I eat and drink whatever most promotes my health.

2. I keep my weight down by reducing my quantity of food: a rule which I confess to be more simple than easy of observance.

3. To facilitate this abstinence I eat often, so as to prevent hunger from getting the mastery: a practice intolerable to an idle and sensual man, as robbing him of his one daily pleasure of dining.

4. To keep my resolution screwed to its sticking place, I weigh daily and strike a weekly average:

finding an occasional weighing uncertain, as my weight sometimes varies from one day to another, as much as $2\frac{1}{2}$ or 3 lbs.

In short I maintain perfect health, but surrender the pleasures of the table.

Now suppose that two unwise friends, knowing my habits, had laid a bet as to my average weight during the past three years: the one maintaining that I had been over $13\frac{1}{4}$ stone; the other that I had been under $13\frac{1}{4}$ stone. I refer to my records, and find that during the

1st year I had weighed myself 5 times, with an average of $13\frac{1}{2}$ stone

2nd year " " 50 " " " 13 "

3rd year " " 100 " " " $13\frac{1}{4}$ "

I may determine the problem by adding together the three annual averages and dividing the sum by three.

$$\frac{13\frac{1}{2} + 13 + 13\frac{1}{4}}{3} = \frac{39\frac{3}{4}}{3} = 13\frac{1}{4}$$

Or I may add together all the individual weights, and divide by the number of weighings.

$$\frac{5 \cdot 13\frac{1}{2} + 50 \cdot 13 + 100 \cdot 13\frac{1}{4}}{155} = \frac{2042\frac{1}{2}}{155} = 13.18 = 13\frac{1}{6}$$

According to the former calculation, the bet would be drawn, as I had been neither under nor over $13\frac{1}{4}$ stone: according to the later calculation the winner would be the man who backed the lower weight. Much disputation would there be as to the determination of the bet.

In treatises on the currency, strange inferences have been drawn from disparate averages. At the present moment, it is a highly interesting question, whether there has been any disturbance of the standard of value, in consequence of the 200 or 300

Currency:
average
prices:

millions £ of the precious metals poured over the world, from California, Australia, and Nevada, aided by the comparatively minute Siberian supplies, which were sufficient in themselves to alarm so sound a thinker as Mr. Tooke. To prove that gold has fallen in value, men set about to show that prices have risen, and that beyond the standard they would have reached through the influences of extended railroads and free trade.

early in this
century :

But this is no new discussion. The Currency Question attracted far more popular attention formerly than it does at present. During the great wars with Napoleon, the inconvertible condition of bank notes, according to most writers, but the continued military demand for gold and silver, according to a few weighty thinkers, led gradually to a perplexing difference of value between paper and gold; and went so far as to cause a guinea to exchange for a £1 note and many shillings. After the peace, the Bank of England was required to redeem its notes at par. There then sprung up a school which vehemently contended that this was a crying injustice to all debtors.

before and
after the
peace.

In support of their opinions, they appealed, and justly, to the prices of commodities during the war and after the peace. In the mode of using these figures however, there was a strange fallacy. The question was, how much prices had risen or fallen: this could not be determined by the fact that penny whistles had risen to three halfpence, or that eau-de-Cologne had fallen by one half. Yet writers of some eminence classed together wheat, potatoes, hay, sugar, indigo, logwood, pepper; and allowed to log-

wood and pepper the same weight as to wheat and sugar. This was an average of averages with a vengeance.

A similar fallacy is found useful by smart contractors, who have friends in collusion with them. A country Union advertises for prices of provisions. Among the tenders sent in, is one for the supply of bread, cheese, salt, and pepper: the price of salt is low, that of pepper very low; the price of cheese is fair, that of bread very high. The four prices on the average are lower than those of the honourable contractor, and the smart man gets the order. He loses a few shillings on some pounds of pepper, gets nothing on the salt, a reasonable profit on the cheese, and an exorbitant profit on the bread. But as the whole value of the bread supplied is greater than that of the other articles together, he robs the Union while he makes sure of the business.

Contractors
for a Union,

This is no fancy picture: the practice actually prevailed during the war, in purchases by our Navy Board, as we learn from Sir Samuel Bentham's Life.⁽¹¹⁾

and for the
Navy Board.

"Amongst the many fraudulent practices in making tenders for works to be done by contract, was that of setting down at low prices those articles of which the quantities required were small, and at high prices those articles of which the quantities required would be great. The practice at the Navy Board was to add the prices together of the several items, without regard to quantity, and to accept the lowest as it appeared by an average thus made. But by this contrivance of contractors, a tender often on the face of it appeared the lowest, although perhaps on the whole contract that lowest-looking one might in fact be the most exorbitant."

A similar error was made formerly in striking the average prices by which the admission of foreign

Corn
averages.

corn was regulated. The prices were ascertained in Liverpool, Stockport, Birmingham, Bury, Warwick, and other market towns of various sizes: each town great or small counted as one, disregarding the quantities sold in each. Bury weighed as heavily as Birmingham; Warwick as heavily as Liverpool. This average of unequal averages was quite inaccurate. Subsequently the practice was rectified; and a town in which 10,000 quarters were sold counted for ten times as much as a town in which 1,000 quarters were sold.

III.

Lies of
inference.

IN my last Section I have treated of false counting, false calculations, and false averages: I now come to a much more important branch, that of false inferences; and I say much more important, because while we have become fully alive to the necessity of accurate enumerations, correct summing, and scientific averaging, we still go on blundering into fallacies by unfounded and rash deductions.

Miscellaneous
examples.

In Sections IV and V, which will follow the present one, I propose to recount some of the fallacious inferences that I have met with, under the heads of Criminal Returns and Vital Statistics. In the present Section I will give a few miscellaneous examples.

The first is one I have already alluded to, as having been made by Dr. Morgan,⁽¹²⁾ a Manchester physician: and I must again protest that I intend no disrespect either to the city or to the man; none

to the city in which statistics are peculiarly cultivated, and which with its large crop of pure growth must needs have some tares; and none to the physician who in a spirited and able tract fell into a mistake which I had myself made years before, though as fortune determined I found it out before publication.

Dr. Morgan's pamphlet was a bill of indictment against great towns, and especially against Manchester, with a count in a parenthesis against Liverpool. The original "Deterioration of Race" is before me; but adopting the summing up of the *Pall Mall Gazette*,⁽¹³⁾ I find some of the charges to be that the factory worker wants stamina and has a relaxed muscular system; that his heart is weak and throbs under the least unusual excitement; that he has cold feet, prominent veins, blanched lips and colourless cheeks; that he suffers from frequent vertigo and neuralgia: all these symptoms being aggravated in the case of one who has been born and bred in the city, and mitigated in the case of immigrants from rural districts.

Ills of great towns.

The deaths it was asserted, in every thousand living, under 15 years old, are—

Death rate under 15.

In agricultural districts	22
In London	34
In London, Liverpool, Manchester, and Birmingham together	45
In Manchester	47
In Liverpool	56
Making the death-rate, under 15, twice as great in Manchester as in all England and Wales, and still worse in Liverpool than in Manchester.	

Three causes were assigned: bad air, contagious Causes.

disease, and drunkenness. As to the first, the force of the perpetual smoke-cloud is proved by such resistance to the sun's rays, that the average summer temperature is 5° lower than that of the outskirts; while for other reasons the winter temperature is 5° higher. The newly discovered element, ozone, is not found in the city: rain is not alkaline, but so acid that a single drop discolours litmus paper.

The air.

I do not stop to investigate all these alarming statements. The allegation that the air is poisoned with sulphureous compounds and carbonic oxide, is confirmed by the scientific and careful Dr. Angus Smith.⁽¹⁴⁾

A false
inference:
why I cor-
rected it.

I have reserved till the last another assertion which I can prove to be unfounded. I should have let it pass uncontradicted at the time, had I not found it adopted and reiterated by the two London papers which I then read. That such published errors ought to be publicly contradicted is unquestionable, and was proved by what happened to myself. I have already mentioned another Manchester publication, which attacked the received opinion as to the comparative healthiness of small towns, and which, after passing through three editions, was withdrawn from circulation. Long after this had happened, I was talking on such matters to M. Boisselier, the French Consul at Birmingham, a great collector of figures for his government: he adduced this tract as proving that small towns were as unhealthy as large ones; and I had the pleasure of witnessing his unmeasured astonishment when I narrated to him the circumstances.

As in that case I had privately corresponded with the author, and he had candidly confessed his error, I took no public notice of the miscalculations: but in Dr. Morgan's case, I got a letter inserted in the *Manchester Guardian*; and securing a few copies, I sent them to the London papers, which abstained thenceforward from quoting the mis-statements.

Letter to
Manchester
Guardian.

The figures which had amazed the London editors, were thus epitomized.

The figures:
number of
births.

AVERAGE NUMBER OF BIRTHS.

To each married couple in 27 agricultural counties . . .	4 $\frac{1}{2}$
" " in London	4
" " in London, Liverpool, Manchester, and Birmingham together	3
" " in Manchester alone	2

Thus, "there are more than twice as many children born to each country-dwelling pair, as are born to each couple in Manchester."

As soon as I saw this table, I compared it with one of my own made a short time before, and it ran thus.

AVERAGE NUMBER OF BIRTHS.

To every 100 married couples living in all England . . .	299
" " " in Manchester	300
" " " in Salford and Oldham . .	305
" " " in Birmingham	313
" " " in Liverpool, according to the register, which I utterly disbelieved in this case only	252

According to Dr. Morgan therefore, the Manchester births were only half what they should be: according to my schedule they were as numerous as those of all England, and only fewer than those of Birmingham.

Explanation:
marriages
and married
couples.

Such a discrepancy was enough to rejoice the hearts of the profane decriers of statistics. But the explanation is easy and indisputable: it will be seen by glancing at the following figures.

Number of Births to 100 <i>Marriages</i> solemnized (not married couples living)	{	Bristol	.	175
		Manchester.	.	201
		Oldham	.	585
		Salford	.	828

The second line of the four, was what Dr. Morgan had relied on, and was no doubt the only one which he had calculated. If he had seen the other three, he would have at once perceived that there was a fallacy: he could not have believed that marriages were five times as prolific in Salford as in Manchester: he would have thought of the fact that couples come in to the city to be married, and go back to Salford to breed: he would have appreciated the distinction between the number of marriages performed in a town, and the number of married couples living in a town: he would have avoided an error, pardonable enough, but made conspicuous by its circulation in the newspapers.

Manchester
Churches.

Another absurd statistical mistake lately occurred in connection with Manchester affairs, and is worthy of notice because it attained much publicity. I became acquainted with it while walking one day with an accomplished clergyman, and conversing about the prospects of popular education and church building. My companion maintained that we ought to have a church for every 3,000 souls: I smiled at the hopelessness of such a consummation: he replied

that what was possible in Manchester was possible in Birmingham. On my denial of his allegation as to Manchester, he rejoined so positively, that I was silenced though not convinced. Returning home, I wrote to a friend and got a diocesan almanack; and though I found myself entangled among the varying boundaries of the Manchester old parish, new parish, poor law district, borough, and city, all called by the same name, but not all coinciding, yet I made out the utter inaccuracy of my friend's account. I sent him my almanack: he visited me to confess his error, and in a state of exemplary penitence. Yet he brought with him a full explanation of his mistake, in an octavo volume containing the report of a Church Congress at Manchester; in which report was the statement that my friend had quoted. Reading the page a second time however, I saw an ambiguity; and I found the real meaning to be, not that the City contained a church for every 3,000 or 4,000 souls, but that a church had been provided for every 3,000 or 4,000 souls of the *additional* population during a certain number of years.

I should have passed over this error in silence, but that unfortunately, it had found its way into the *London Guardian*, and had been copied into other papers.

Another misunderstanding as to births, is far less simple than the one I have mentioned above. It is well known that among the births registered, the males everywhere exceed the females: the excess is generally called 5 per cent., but it is not commonly known that it varies in different places from 4 to 6 per

Excess of
male births;

cent. The ordinary notion is that 105 boys are regularly born to 100 girls. A sceptic like myself, long familiar with statistical lies, may be excused if he demands further inquiry: if he suggests that birth-registers may be inaccurate, and may be more inaccurate in one place than in another.

partly only
apparent.

But supposing inaccuracy, would not that be found equally as to both sexes? I think not: I believe that throughout the world the birth of a boy is more of an event, and more certain of record, than the birth of a girl; and that feudal customs as to descent of land, have exaggerated this natural preference in modern Europe. It is not unlikely therefore, that male births are more carefully registered than female; and that part of the apparent excess of male births is owing to this cause.

Illegitimate.

If we come to the births of illegitimate children, the circumstances are different. In England, at any rate, the mother of an illegitimate, registers its birth not with any view to a possible inheritance, not from the expectation of continuing a family, but to get a claim on the putative father. Now this is equally important whether the child is a boy or a girl. In this country therefore, we may assume that the two sexes are equally registered in the case of illegitimates; and as many legitimate boys are probably better registered than girls, it follows that judged by the register, the excess of boys over girls will be the greater in the case of legitimates. Suppose,

Legitimate: Born 105 boys and 102 girls; registered			
104 boys and 100 girls	.	.	Excess, 4
Illegitimate: Born 105 boys and 102 girls; registered			
104 boys and 101 girls	.	.	Excess, 3

Now this difference between legitimate and illegitimate, has been a copious source of debate. The explanation I have given not having been thought of, it has been believed that there existed a real difference between legitimates and illegitimates as to the proportion of the sexes; and the cause of that difference has been inquisitively sought. Strange explanations have been offered; the most popular I believe being that a great proportion of illegitimates are the first children of their mothers, and that *perhaps* first children are more often females than are their successors. A *perhaps* is not a satisfactory basis for an explanation. Conjectural statistics again!

It may be thought however, that my explanation is founded on a conjecture: on a "Perhaps boys are the better registered." But this is not so. The notion occurred to me as an explanation of a difficulty which arose in another investigation: the notion appears to me to be far higher than a conjecture, because while it is in itself highly probable, it harmonizes facts otherwise unexplained, and therefore rises from conjecture to hypothesis, and from hypothesis to theory.

My notion
not a con-
jecture but
a theory.

The facts are these. In a paper I read to the Statistical Society in 1865,⁽¹⁵⁾ I inquired whether the Census of 1861 gave results consistent with the figures of the Registrar-General. If in a certain town, during the twelve months preceding the Census, there had been registered 1,000 births and 200 deaths out of these children born, the Census ought to have shown 800 infants under a year old: if in England there had been registered 600,000 births, and 100,000

How proved

deaths out of these, the Census ought to have shown 500,000 infants under a year old. There would of course be some disturbance by emigration, and by migration from Scotland and Ireland, and from county to county. Taking all these circumstances into account, I found that the Census had much understated the numbers of infants.

The two
sexes.

For the present I will not enumerate the particulars: I will confine myself to those which bear upon the question before us. The infants I say, were greatly understated, if we were to believe the Registrar-General's figures: so many births; so many deaths; so many therefore, left alive: what had become of those who did not appear in the Census? But the most perplexing circumstance was this:

Understated in the case of boys	12 per cent.
„ „ of girls, only	10½ „

Was it likely that in so mere a form as hastily filling up a printed census paper, not to be preserved as evidence, a parent would remember one sex more than the other? Revolving the matter, I saw that the difference might arise in registering the births: then I thought of the possibility that many parents would be more intent on registering a boy than on registering a girl. After discussing this with competent friends, I concluded that there was a high probability of this preference existing; and as the conjecture solved the problem, I regarded it as a fairly established theory.

Conclusion:
from figures.

My explanation then, is not founded on a perhaps, but on figures otherwise unexplained. I conclude that the difference between legitimates and illegiti-

mates as to the disproportion of the sexes at birth, is apparent and not real, and is the result of defective registration: more defective in the case of legitimate girls than in the case of illegitimate girls. As to those who say that illegitimates are often first children, and that perhaps first children have more girls among them than other children have, let them count some thousands of first children of each sex, and give us the results.

I come now to a very different matter: the amount of crime and immorality alleged to exist in the City of London. In a former Essay I referred to Mr. Scott's Statistical Vindication; and I ventured to differ from his opinion as to his clients' commercial superiority over that of their countrymen. I am pleased now to use his defence of the City against charges made by respectable authorities.

Crime in
City of
London.

It is well known⁽¹⁶⁾ that the increased value of sites in the City, tends to diminish the number of dwellings and of residents. Up to 1851, these were about stationary, but since that year they have been much reduced.

The City
and the
Metropolis.

Population—1801: Metropolis, 958,863; City, 128,883.

1851: " 2,362,236; " 129,251.

1861: " 2,803,989; " 113,387.

1866: " " 104,908.

Therefore,

In 1801, the City was in numbers more than $\frac{1}{8}$ th of the metropolis.

In 1851, " " only 1-18th "

In 1861, " " only 1-25th "

But it has been alleged that offences have not diminished in the same proportion. The late Com-

missioner of Police stated that for every crime committed in the Metropolitan District, there were $2\frac{1}{2}$ committed in the City, population considered: while as to crimes of the graver class, the proportion was still higher, being as 3 to 1. Another eminent witness, Mr. Edwin Chadwick, quoted these figures, adding, "I know that if Sir Richard Mayne gives statistics, I can rely on them."

It was mentioned also, and proved by Judicial Statistics, that the City of London was one of the most drunken places in the kingdom.

Answer: day
and night
population,

Mr. Scott's answer to these statements seems conclusive. He points out that what the Census gives, is the number of persons who *sleep* in each corner of the kingdom, not the number who otherwise reside there: that the 100,000 inhabitants of the City are those men, women, and children, who sleep in the City; and that it does not include those throngs of people who spend their days there, but go outside in the evening. To correct this inaccuracy, the Corporation in 1866 ordered a census to be taken of the day population. The following are the results.⁽¹⁷⁾

The *total day* population residing in the City, 283,520

The persons <i>resorting</i> to the City daily in	}	509,611
16 hours (besides the 283,520 above)		

No doubt, there would be much error in distributing the crime and drunkenness among all these persons; because a person may visit the City for an hour, and devote a dozen hours elsewhere to vice. The question is rather what is the average population: but having ascertained that, we could not fairly attribute to the population that sleep in the City, even a pro-

portionate share of the offences. We ought to confess that with so shifting a population, we can form no opinion of the morals of the stationary nucleus. The case is like that of the death rate in a watering place, where the census-population is 5,000 and the season-population 20,000: how many of the deaths belong to the fixed 5,000, how many to the shifting 15,000; and what value therefore, have the published mortality tables?

We cannot doubt that the day population are guilty of a great many of the offences. Even drunkards and criminals other than burglars, generally sleep at night: it is during the day that they drink, pilfer, embezzle, utter base coin, and commit assaults. A large part of City crime therefore, must be laid to the door of the day population; and the accusations by Sir R. Mayne and Mr. Chadwick are seen to be absurd.

On another, and a very painful topic, that of insanity, there have been drawn some rash inferences, possibly true, certainly not proved. That the *known* cases of insanity have increased, will be seen from these figures.

Insanity:
alleged
increase.

ENGLAND AND WALES.

1836—Population, 15 millions; insane paupers, 14,000 = $\frac{1}{1066}$ or less.
1868— " 21 $\frac{1}{2}$ " " 43,000 = $\frac{1}{236}$ "

FRANCE.

1835— In asylums, 10,500: private, 24,500; total, 35,000.
1861—Increase of population since 1835, 10 per cent.
 . . . therefore, the known insane *should* have numbered 38,500.
 . . . but they *did* number 83,000.

Popular writers, looking out for anything startling, at once assume that insanity has doubled both in England and in France. Grave writers may be found, who believe that there really has been an increase, though all we can affirm, is that there has been an increase in the known cases. A cause for the alleged augmentation is readily found: the fast rate at which we live, excites our brains, and madness follows. Perhaps however, this explanation would not be so glibly offered if it were known that according to the Registrar General, in London, the supposed focus of fast living and over pressure, there is an unusually small amount of brain disease.⁽¹⁸⁾

NUMBER OF MALE DEATHS FROM BRAIN
DISEASE, 1851-60, TO EVERY 1,000 LIVING.

In Leeds	47
„ Manchester	44
„ Sheffield	42
„ Liverpool	37
„ Bristol	35
„ Wolverhampton	34
„ All England	30
„ Birmingham	29
„ <i>London</i>	28

I must beg to be understood as attaching little importance to these figures in themselves: I only offer the comparison as a drag on the rapidity of some gentlemen's inferences.

French
authority
for increase.

I say that even grave writers have believed in an increase. M. Lunier, whom I have seen cited as the highest French authority, maintains that French in-

sanity has doubled in a short period. I confess I suspect M. Lunier of having contracted that morbid mental condition which is said to frequently attend persons conversant with lunatics.

It is confessed that the number of French idiots and cretins has diminished: may not a change of classification have increased the nominal madmen to the same extent?

A few years ago,⁽¹⁹⁾ our Lunacy Commissioners carefully discussed this question, and assigned their reasons for believing that the pauper increase was only apparent, and arose from collecting in asylums the miserable creatures formerly confined in dismal holes and corners, receiving little more attention than so many wild beasts. A nice distinction however, is necessary. Even though there are no more persons become insane, there will be more insane persons living; because under the more kindly and scientific treatment in asylums the incurables live longer.

Our Lunacy
Commis-
sioners
deny.

The increase being believed in France, causes have of course been assigned: various causes; augmented smoking, universal suffrage, wild speculations on the Bourse. As to the first, I find this statistical form.⁽²⁰⁾

Alleged
causes in
France.

In 1835—

Revenue from tobacco, 70 million francs: inmates of asylums, 10,500

In 1870—

Revenue from ,, 184 ,, ,, ,, ,, 30,000

“Le parallélisme est frappant.”

The Baron Charles Dupin has thought it worth while to acquit universal suffrage, by showing that it does not produce nations of madmen in Switzerland

and the United States. Tobacco has been defended by a rather contemptuous denial; and by appealing to the sanity of the tasters in the Government manufactory, who correct bad symptoms by drinking strong coffee. The recent unhappy widely-spread addition to absinthe, may be partly chargeable: for although a writer in the *Lancet* has denied that there is anything poisonous in the wormwood from which the liqueur is named, there is no doubt that in fact absinthe drinkers do often fall into a distressing condition.

Men and
women.

Some of the figures are at first sight puzzling. We cannot doubt that excesses in smoking and drinking tend to mental as well as bodily disease. Now smoking is unusual among women, and drinking is far less usual among them than among men. Yet there are more women under confinement than there are men: in England as 23 to 18. Other figures lessen the wonder. Though there are more women under confinement, there are in both countries more men who enter the asylums: in France as 54 to 46. In England the explanation given is that the men die off faster, and that this more than balances the greater number who enter. In France, as I see it stated, the men are cured more quickly. Perhaps it may be true that men under confinement die faster or are cured faster: if so, we may say that men are more quickly removed by cure or by death. Suppose these figures.

Enter the asylums . . .	Women 100,	Men 106
Deduct removed by cure or death ,,	6,	18
Remain in asylums . . .	94,	88

There are 6 more *men* enter.

There are 6 more *women* remaining.

Fanatical teetotallers must feel themselves aggrieved by these figures. Strong drink, they say, is the principal cause of vice, disease, crime, misery, and madness. Women drink little and men much : women during half their existence die more slowly than men : female crimes are only a fourth of men's : but in lunatic asylums there are more women than men. My explanation lessens the force of the grievance, by showing that more men become insane ; but still the difference is so small, that teetotallers should exclude madness from their list of ordinary consequences of drinking. Men drink, and commit four times as many crimes as women : they drink, gamble, speculate a great deal more, and become mad only rather more than women.

Criminals : women 100, men 400

Lunatics : women 100, men 120.

Tables are given us of the immediate causes of lunacy : investigations have been made among prisoners, as to the immediate causes of their first lapses into crime. Both in lunacy and in crime, drinking is only one of many immediate causes.

In most of the examples I have given, the errors are those of private persons, possessed of no especial means of getting their performances corrected : though there is one important exception ; that of the moral condition of the City, as depicted by the Chief Commissioner of Police.

I will now mention a case, in which alarm and anger were excited by an official statement which proved unfounded.

Teetotalism.

Official errors.

Army
mortality :

The Royal Sanitary Commission⁽²¹⁾ some years ago, got hold of certain figures as to the strength of the British forces in India, and as to the number of deaths which had occurred.

at home ;

It will be remembered that more recently, the mortality of our troops at home, was found to be disgracefully high ; amounting to about 18 in 1,000 per annum : while the deaths of men of the same healthy ages throughout the country were about half as many. To this it is added that soldiers are picked men, the unhealthy ones being rejected ; though against this favourable feature must be placed the unfavourable one of the inevitable coarse vice among ignorant, idle men, principally bachelors, crowded together. We may congratulate ourselves on being now told that the former death-rate of $\frac{18}{1000}$, has been reduced to $\frac{9}{1000}$; in a great degree through the measures set on foot by the late Secretary for War, the good Lord Herbert. I should be glad however, to be assured that no part of this improvement is owing to other changes, such as an alteration in the mode of invaliding ; an alteration which in India is said to have disturbed the terms of comparison.

and in India.

Shameful as was the former rate of $\frac{18}{1000}$, it looked quite decent by the side of that alleged to prevail in India ; where, according to the Royal Sanitary Commission, the rate during sixty years had been $\frac{69}{1000}$: nearly four times as high as that of the same soldiers at home before the reform, and nearly eight times as high as that of men of the same ages engaged in peaceful pursuits at home.

False
inference :

Though the figures given were undisputed, the

inference drawn was false. The deaths really had state of war. been $\frac{69}{1000}$ per annum: but the Commission overlooked the fact that during the greater part of the period in question, the army was engaged in war; and that before the construction of railroads, the mortality caused by long marches, pestilential bivouacs, insufficient supplies, rains at one time and drought at another, thinned an army faster than the bullets of the enemy. Indian war was compared with English peace. By such calculations, what would have been the death-rate during the hasty retreat of Corunna, or during the bloody days of Assaye, of Albuera, or of Waterloo? What would have been the death-rate per annum in the navy, during the days of the Nile or of Trafalgar?

In recent years of comparative rest, the rate has been:—

In 1863, for all India	.	.	about 20
In 1864	„	.	21
„ for the Punjaub	.	.	14½

We have been told that since these dates a reduction has been effected; but I am sorry to see it said by a medical man that this reduction is only apparent, being really a result of a change in the practice of invaliding, through which the deaths are recorded elsewhere.

It is not denied that in the first half of the century, and even of late, remedial means were wanted; it is hoped that a further great reduction of deaths may be effected by a better choice of stations, by sanitary precautions, and by the use of ever lengthening railroads: but there are posts which must be held notwithstanding inevitable cholera and pesti-

lence. However this may be, the Royal Sanitary Commissioners' bare report of a death rate of $\frac{69}{1000}$, without a qualifying notice of the prevalence of war, showed ignorance or wilfulness.

Element of
time:
sanitary
reformers.

One very common cause of error is the neglect of the element of time: this is eminently true on the part of sanitary reformers. Rugby or Windsor has a high death-rate: new drainage is carried out: the next year the death-rate is lower: a *Te Deum* is chanted: the following year the rate is as high as ever. Great discouragement follows the disappointment. These ready singers ought to have recollected that rates vary greatly in particular places, from unknown causes: they should not have rashly said, this particular year's reduction is owing to improved drainage.

Birmingham,
1868,

In 1868, the Social Science Association met in Birmingham: the season had been singularly hot and dry; and from that cause perhaps, the prevalent summer diseases of the town had been unusually fatal. Here was a fine opportunity for philippics: men ignorant of the subject could read the figures and see that the population had been dying fast: it was nothing to them that people everywhere die fast during epidemics. But as if to show the badness of the logic, no sooner had the meeting come to an end than the death-rate fell; and remained so low till Christmas as to counteract the previous high rate, and to bring the average of the whole year down to its ordinary moderate level.

This low rate continued during 1869; and during the Session of Parliament, it was used to point an argument. A deputation waited on the Government to urge the introduction of a Permissive Bill. The harassed Home Secretary, after listening with resignation, remarked that there were certain figures unfavourable to the arguments advanced; since while Birmingham, where drinking was comparatively unshackled, had just then the low death-rate of 20, Glasgow, with a Forbes Mackenzie Act, had a rate nearly twice as high. The implied inference was just as absurd as the inferences of the Association in the previous autumn. If the Home Secretary had said, as he might, that on a ten years' average, the Birmingham rate had been far lower than that of Glasgow, that would have been less absurd: though it might have been replied that in Liverpool and Manchester, with equally unshackled drinking, the rates were much like those of Glasgow. At any rate, to appeal to the Birmingham death-rate at the particular moment, without regard to a longer time, was quite unreasonable.

1869.
Unfair
inference.

On the subject of the Poor Law, some persons draw strange inferences from the published figures: they seem to fear that the poor-rates will swallow up the incomes of the middle and upper classes. It might be a sufficient answer, that the whole sum raised as poor-rates, has been about 10 millions £ on an average of some years: while though it has increased, the national income has also increased; the aggregate incomes of the middle and upper

Poor-Rates.

classes being thirty or forty times the sum raised as poor-rates. Besides; of this 10 millions £, only two-thirds are really expended on the poor: the other third going to County, Police, and Highway Boards.

Figures
1716 to 1869.

We shall still be told that there has been an alarming advance: from a million £ a century ago, to 7 millions £ now. Let us look at some figures.

1776.	Expended, $1\frac{1}{2}$ mill. £; population, probably under $7\frac{1}{2}$ mill. (wheat 40s. to 45s.); relief	4s. 0d. a head
1783-4.	Expended, 2 mill. £	
1795.	Sir W. Young's Act, granting out-door relief.	
1803.	Expended, 4 mill. £; population, $9\frac{1}{2}$ mill. (wheat, 65s.)	8s. 5d. a head
1813.	Expended, $6\frac{1}{2}$ mill. £; population, $10\frac{1}{2}$ mill. (wheat, 125s.)	12s. 5d. a head
Now.	Expended, 7 mill. £; population, 22 mill. (wheat, 52s. average)	6s. 0d. a head

The amount⁽²²⁾ expended per head ought to vary partly as the cost of wheat, and partly as the standard of comfort, judged by the rate of wages. Indeed if I said that it should vary nearly as the rate of wages, I should not be far wrong. Now since 1776 the rate of wages has more than doubled, taking into account not only the increase in farm wages, but the great multiplication of town labourers earning from 16s. to 30s. or 40s. a week. There would have been nothing extraordinary, if the relief per head of population had more than doubled: it has only increased by one-half (from 4s. to 6s.).

In 1776, there was no out-door relief; but at present this is a large part of the whole; and especially in towns, where the frequent and severe fluctuations of trade render men's incomes very

uncertain, and deprive artizans of employment for weeks or months at a time; and where it is found that it is miserable mismanagement to break up a man's home, and render him a pauper or a tramp for life. Yet our expenditure for in-door and out-door relief together is far less than it was in 1776, population and rate of wages considered.

Those therefore, who fear being eaten up by our paupers, should reconsider the inferences they have deduced from the published figures. Especially should this be done by our French critics; who traditionally declaim against our poor law, as a canker eating into our vitals.

Agricultural rents again, have been the subject of false inferences. When the corn laws were abolished, the landlords trembled for their incomes. They might well do so; since a high authority among free traders had pronounced, that the average price of wheat, which had been about 55s., would fall to 35s. The average has actually fallen only a few shillings, or enough to reduce the price of the quartern loaf by a halfpenny. In mentioning this I do not intend to depreciate the free trade measures, which have steadied prices, and what is of far more importance, have brought greatly increased supplies within our reach. I also admit that we are unable to say at present, how far it is through the gold discoveries that prices have been kept from falling.

In the mean time, we free traders have been watching the income tax returns, to learn how

Agricultural
Rents,

under free
trade.

agricultural rents have been affected; and we have crowed greatly on finding that they have risen rather than fallen: we have triumphantly said that the small diminution in the price of corn, has been more than compensated to the landlords by the rise in the prices of other produce.

We have forgotten to inquire whether other causes have been at work. A farmer's rent consists of a payment not only for the use of land, but also for the use of capital laid out in farm buildings, drainage, and other improvements. In 1859, a Scotch landlord, Lord Airlie, in a letter to the *Economist*, pointed out this oversight of ours. The agricultural correspondent of that paper had maintained on the strength of bare figures, that Scotch land was steadily rising in value. The figures, said Lord Airlie, are correct, but the inference is false. Certain farms had, on the expiration of leases, been let at advanced rates: but the condition of the farms had changed between the dates of the two lettings.

“During the last 30 years, a very large sum has been laid out by my father and myself, both on drainage and on farm buildings. And in almost every instance in which a large advance of rent has been obtained on any of my farms, I have entered into engagements to lay out considerable sums on improvements. The farm of West Mains of Aucter House, to which you refer, has been for a very long time in the occupation of one family. It had been let at what was considered a fair rent; but circumstances to which I need not refer, caused it to be brought into the market this year, and it has been let at an advance of 3 per cent.: not a very extra-

Interest on
improve-
ments.

Lord Airlie's
case.

ordinary rise certainly. Newton of Lintrathen was for upwards of 20 years (I am writing from memory) in the occupation of a tenant who carried on improvements with great energy and judgment; and on that account the farm was let to him at a very low rent. On his death the farm was advertised, and it is not at all surprising, considering that it had previously been let at a rent far below what it was worth, and that large sums had been laid out on improvements, that a large increase of rent has been obtained." Lord Airlie added that in some cases there really had been a rise through the increased prices of butchers' meat and wool. In short the *Economist's* correspondent had been partly right in his inferences from naked figures, but to a considerable extent wrong.

There are persons to be found, who contend that all rent is the result of an outlay of capital. At any rate, when we find an augmentation in the income tax assessments of Schedule A, before we pronounce that land has risen in value, we should ascertain how far the additional rent is a mere payment for capital laid out.

Two kinds
of Rent.

One more agricultural topic will conclude this section. Rather recently, we have begun to get regular returns furnished to us, of the annual acreage under different crops, and of the numbers of cattle and sheep kept. We have always believed our countrymen to be great consumers of meat: yet these returns inform us that comparing England with other countries, few cattle are kept here. The

Agricultural
Returns:
Live Stock.

latest form I have seen, that of Mr. Caird, is to this effect :—

That as to sheep, in proportion to population, England and France and Prussia have about equal numbers :

That as to cattle, for every 100 persons living, France has 36 head, Prussia 33, and England only 20.

Meat eaten
in Great
Britain.

Yet I do not doubt the truth of the received opinion, that Great Britain is the principal meat-eating country of Europe.

London,
Austria,
Ireland.

In the first place, some countries rear cattle for others to consume. The 200,000 sold annually in London, are to a great extent provided by the Continent. Austria exports cattle annually to the value of $1\frac{1}{2}$ million £, or a fourth of the estimated value of her whole stock, and her sheep are comparatively few. We may be more impressed by the case of Ireland, which we know to eat little meat, and which yet possesses in proportion to population, three times the cattle of England.

France :
sheep.

But then there is France, which is as well off as England in the number of sheep, and possesses nearly twice as many cattle. M. Léonce de Lavergne will enlighten us. When he wrote some seven years ago, he believed that though the number of sheep in England and Wales was fewer by a seventh than that in France, yet in proportion to the acreage of the two countries (37 million acres and 130 respectively) it was three times as great. At that time too the population of France was not far from twice that of England and Wales ; so that our proportionate number of sheep was far the greater.

But mere number is only one element in the comparison: there is a great difference in the character of the sheep; those of France being bred especially for their wool, those of England for their flesh. Besides this, there is the question of the age at which the sheep are slaughtered. Formerly, they had a comparatively long life; now, five year old mutton is an unusual luxury. Careful breeding has given the graziers sheep, cattle, and pigs, which arrive at a precocious maturity. When we complain of the plethoric animals which disfigure our shows, we are told that they are produced as a proof of the fattening propensity of the breed to which they belong. But if animals generally are allowed to live twice as long in Périgord as in Leicestershire, there must be twice as many living in Périgord in order to supply an equal quantity of meat. If, also, the Périgord are only half as large as the Leicestershire, there must be then four times as many living, in order to supply an equal quantity of meat. Taking the population of Great Britain and Ireland together as three-fourths of that of France, M. de Lavergne calculated that the quantity of mutton killed in these islands was greater in the proportion of 800 million pounds to 320; or population considered, as 3 to 1.

Size, etc., of
sheep.

In comparing the numbers of horned cattle, we must recollect that on the Continent, great numbers are still used for draught, and take the place of our horses. In Périgord, even the cows are thus used: milch cows are not kept, and therefore milk and butter are unknown. Again: we learn only the number of cattle, and not their weight: so that in these comparisons a little unimproved beast counts

Cattle: for
draught.
Weight.

for as much as one of our shorthorns, or as a Devonshire ox.

We see that any inference drawn from bare enumeration is not to be trusted; and that there is nothing to contradict the established opinion that much meat is consumed in Great Britain.

Conclusion
of Section :
recapitula-
tion.

This concludes a rather long list of miscellaneous examples, illustrative of false inferences. I have shown how Dr. Morgan, in a striking pamphlet on the sanitary condition of towns, alleged the barrenness of Manchester wives as a proof of deterioration of race; falling into this mistake by comparing the number of marriages with the number of births, and overlooking the fact that thousands of couples visit the city to be married. I have mentioned how, from a statement that the *additional* population of Manchester was amply provided with church accommodation, it was falsely inferred that the *whole* population was equally well provided: how from an inspection of European registers, it has been concluded that the excess of male births is 4 or 5 per cent., whereas in England and Scotland a comparison of registered births and deaths with the enumeration by the Census, proves that, as might be expected, boys are better registered than girls: I have pointed out that this explains a curious discrepancy between the legitimate and illegitimate births, as to the disproportion of the sexes. I have gone on to quote from Mr. Scott a vindication of London City from authoritative charges of excessive drunkenness and crime; showing that the slander has arisen from a

confusion between the day and the night population: the Census taking account of only that portion which sleeps in the City; and a large number of the offences being committed by those who do not sleep in the City. As to insanity again, I have shown that the augmented number of known cases, furnishes no ground for inferring an increase of mental disease. I have investigated the obvious inferences deducible from the careless report of a Royal Commission, which exhibited the death-rate of the Indian army during half a century as $\frac{6.9}{1000}$; while it failed to explain that this frightful mortality occurred for the most part in times of war, before railroads had reduced the fatal effects of marches. I have remarked upon the necessity, in many cases, of taking a considerable period of time into account; and I have shown how zealous sanitary reformers so late as 1868, exhibited their ignorance of this rule, by founding on a casual outbreak of disease, arguments, sound only when based on a long average death-rate. I have complained that foreign writers, and some English ones, misrepresent our present poor-law expenditure as ruinously increasing; although in truth the six to eight millions sterling now required, as compared with the million and a half of a century ago, are only proportionate to the growth of population and the rise in prices and wages. With regard to agricultural rents, I have quoted a Scottish landowner as showing that recent advanced lettings have arisen in many cases, not from an advanced value of land, but from an outlay on improvements. Finally, I have noticed the paradox, that the English, a great meat-eating people, have

fewer sheep and cattle than countries reputed to be vegetarian: I have explained that we import meat but they export it; that our sheep and cattle are comparatively gigantic, and are killed young; that among continental farmers, cattle being used for draught, take the place of our horses; and that we have the high authority of M. Leonce de Lavergne to support the received opinion as to our large consumption of animal food.

IV.

Crime and
immorality :
our returns.

IN the present Section, I propose to adduce some fallacies in the inferences drawn from returns of crime and immorality. Of late years we have had regular schedules of Judicial Statistics, besides returns of suspected persons and of ill-reputed houses. We were slow in getting these important papers; for as Mr. Hammick tells us,⁽²³⁾ though as early as 1810 we had Tables of Criminal Offenders, yet these left out both the numbers committed for trial, and the numbers summarily dealt with by magistrates. After a quarter of a century, in 1834, Mr. Redgrave much improved the tables: but he was ill supported, and the returns, notwithstanding his zeal, gradually deteriorated. Up to 1853 little having been done, the subject was discussed at Brussels in the Statistical Congress; and in 1855 a renewed debate at Paris led to formal remonstrances by social reformers, supported by a vigorous speech from Lord Brougham, in the House of Lords, followed by proposed resolutions which he withdrew on an authoritative promise

of amendment. In 1857 accordingly, appeared a mass of figures in a quarto volume called Judicial Statistics, since annually repeated; and though many years' experience has not made them perfect, a good deal has been done towards that consummation.

Great and honest as are the labours by which these returns are prepared, they are capable of leading to unhappy consequences: unpractised writers may draw from them inferences which may discourage future exertions against crime, by proving the uselessness of past efforts, or may land us in a fool's paradise, by a roseate picture of improvement realised.

Possible
false
inferences.

It is possible to attempt many comparisons: as of generation with generation, shire with shire, town with country. But the least satisfactory of all is a comparison of one nation with another. Even as to England and Scotland, though after a union of a century and a half these countries ought to be amalgamated, and for most purposes are so; yet the differences of laws and judicature are so considerable, as to make impossible any fair comparison between the criminal convictions of the two. I confess this to my shame; because without possessing the means of determining whether the two countries had the same classification of offences, I once adopted a statement I met with, that Scotland committed more crimes of ferocity than England.

Com-
parisons:

But a stronger international example has lately occurred. A distinguished evening paper pounced gleefully on a great morning paper, in the act of contrasting the offences of France and England,

England
and France.

and of thus drawing a sketch very unfavourable to our morals. The statements were these.

1866 : Cases tried before a jury	}	in France, 3,000 to 4,000
		in England, about 20,000
1866: Cases tried before police courts or at Petty Sessions.	}	in France, 140,000
		in England, 340,000

But the excessive wickedness of England is far greater than these figures indicate, because the population of France exceeds that of England as 37 to 21. Raising the English criminal figures in this proportion, they will stand thus.

1866 : Cases tried before a jury	}	in France, 3,000 to 4,000
		in England, about 35,000
1866: Cases tried before police courts or at Petty Sessions .	}	in France, 140,000
		in England, 595,000

Ten times as many indictments, and four times as many misdemeanors !

It is strange that differences of such vastness did not create suspicion. Perhaps they did so : but we know that if a writer has undertaken to supply a newspaper article, the pressure of time makes doubt a forbidden luxury. The answer of the evening paper, appeared several weeks later, after inquiry and mature thought.

Explanation.

The comments were to this effect. The Censor had overlooked the huge mass of cases tried before the French tribunals of simple police ; amounting to more than 500,000.

The following figures were given : the English figures being increased as 37 to 21, to allow for international difference of population.

France, 1865.		England, 1866.	
Cours d' Assises	3,237	On Indictments	24,984
Tribunaux Cor-		On Summary	
rectionels .	155,631	Convictions .	593,409
Tribunaux de			
Simple Police	503,123		
	<u>661,991</u>		<u>618,393</u>

The tables were now turned, and it was France which appeared as having the greater total of offences. When we recollect too, that France is an agricultural country and that England is a manufacturing country, and that it is in our great towns that detected offences prevail, we must charge a still greater excess against France.

It may fairly be contended that the tables prove little, under the impossibility of comparing the whole judicial administration of both nations. One thing at least it proves clearly: I mean the futility of the morning article, setting forth the excessive iniquity of the Anglosaxon, and the lamblike innocence of the Gaul. As to the more important matter of a sound comparison; it may seem that the sentences pronounced ought to be taken into account, and that this might be done by inquiring the numbers in each country who are undergoing imprisonment. But the terms of imprisonment have been much shortened in England. This is not the case in France so far as one can judge by occasional trials: as for example, an English pickpocket lately convicted in Paris, had as long an imprisonment inflicted, as in London he would have had for a highway robbery without violence.

Inter-
national
comparison
of murders,
&c.

I have lately met with two international comparisons;⁽²⁴⁾ the one taken from the *Neue Freie Presse*, the other from a return issued by the Italian Government: the one as to the number of murderers, the other as to the deaths by violence.

NUMBERS YEARLY TO EVERY MILLION OF POPULATION.

	German Account: Murderers.	Italian Account: Deaths by Violence.
Belgium . . .	—	1½
Sweden . . .	—	20
England . . .	1½	19½
Holland . . .	6	—
North German Bund .	10	—
Austria . . .	13	—
Italy (Northern) .	—	37
Spain . . .	250	82
Papal States . .	1333	—
Italy . . .	—	108*
Italy (Southern) .	—	198

The ambiguities of these accounts scarcely require comment. In the first column the 1½ attributed to England, may or may not include Scotland and Ireland: it is intended I suppose, to represent the number capitally convicted: for it greatly exceeds the number executed. In the second column the 19½ deaths by violence are only a small fraction of the violent deaths, if we include accidents by machinery and in mines. In the second column, England appears thirteen times as unfortunate as Belgium: but probably, the 1½ to England in the

* Of which 10 involuntary.

first column is the equivalent to the $1\frac{1}{2}$ to Belgium in the second. The Papal States appear a thousand times as bad as England: how much Protestant prejudice has gone to this statement? There is but one comparison which we can fairly make; I mean one between Northern and Southern Italy: we can trust this comparison because the numbers are given for both by the same authority. We can say that perhaps deeds of violence were five times as rife among the ignorant people of South Italy, as among the comparatively enlightened people of North Italy.

The conclusion I arrive at, is that international comparisons of crime are of little value; and that ordinary articles on such subjects belong to the Lies of Statistics.

I am sorry to say that as to one English district and another, inferences natural in appearance, are often ambiguous.

Comparison
of English
districts.

A dozen years ago, some returns of young criminals were supplied by the police to an inspector of reformatories; and four districts were compared. If these had been as wide apart as Cumberland, Lincolnshire, Cornwall, and Kent, great variations might have been expected: but they were near together, consisting of Stroud, Gloucester, Cheltenham, and part of Bristol. According to the figures given, of the youths committed in five years, there came from the district

Four
districts:
juvenile
crime.

Of Cheltenham,	232,	the population being	49,056,	or 5 in the 1,000
„ Stroud,	139,	„ „ „ „	43,001,	or 3 „ „ „
„ Bristol,	36,	„ „ „ „	44,407,	or 1 „ „ „
„ Gloucester,	14,	„ „ „ „	33,629,	or $\frac{1}{2}$ „ „ „

According to this test, the criminality of Gloucester

was one-tenth that of Cheltenham: the criminality of Bristol was one-fifth that of Cheltenham. It is true that the district called by the name of Bristol, was principally outside the city, though it included the parish of St. George. It is hard to believe that even such a district had only a third of the criminality of Stroud.

Alterations
of the law.

We have difficulties caused by the rapid changes of the law. Within a quarter of a century, the functions of Petty Sessions, of Quarter Sessions, and of Assizes, have been greatly varied. Formerly, the magistrates might put a man in the stocks for drunkenness; but if another were charged with cutting a twig, value one farthing, he must needs be sent to gaol for trial by a superior court, weeks or months afterwards. Nay, if the delinquent were a boy, the same tedious and demoralizing previous imprisonment must be undergone. After long remonstrances, Parliament altered the law, and conferred on Petty Sessions powers of dealing with trifling offences; at first as regarded juveniles, and afterwards as regarded adults. The Juvenile Offenders' Act was passed in 1847 (10 and 11 Vict. c. 82); and was supplemented by two acts in 1866 (Juv. Ref. 29 and 30 Vict. c. 117, and Ind. Schools c. 118). The act relating to adults was passed in 1855 (18 and 19 Vict. c. 126) and was supplemented by another act in 1868 (31 and 32 Vict. c. 116).

Comparisons
useless.

We may amuse ourselves by comparing the number of indictments before and since 1847, but we cannot pretend to profit by the process; since the Petty Sessions now deal with thousands of

cases which formerly swelled the mass of indictments. Even if we add together the present summary convictions and indictments, and compare the total with the corresponding total before 1847, we shall still be misled; because considerate men formerly shrank from exposing children or even adults who had committed trifling offences, to the evils of long imprisonment before trial.

But if we cannot correctly estimate the number of offences in different places and at successive periods, much less can we draw any safe inferences as to moral character. A dozen years ago, I pointed out that what was then called the "Relative Criminality of different Counties," gave strange results. I found that

Inference
as to
immorality.

In Middlesex	there were to every	1,000 persons,	10 commitments						
„ Lancashire and Surrey,	„	„	„	8	„	„			
„ Northumberland and Warwick	„	„	„	6	„	„			
„ Yorkshire, Herefordshire, and	}	„	„	4	„	„			
Shropshire									
„ Cumberland	„	„	„	2	„	„			
„ Merionethshire	„	„	„	$\frac{1}{2}$	„	„			

Taking the mere figures, we might infer that Merionethshire had a fourth of the criminality of Cumberland, and a twentieth of that of Middlesex. But every one knows that the number of cases brought before the courts, depends very much on the facility of reaching the courts: that where there is no policeman at hand to take charge of an offender, and no petty sessions within easy reach, detentions and prosecutions will be rare. We shall therefore be wrong if from the number of convictions we infer the number of crimes. Much more wrong shall we be if we draw any

inference as to the character of the ordinary population. The unfortunate, the disgraced, the criminal, hide their heads in towns, and relieve the rural districts of their presence: their poverty, their squalor, their offences, lengthen the rolls of town pauperism and immorality and crime, though their misfortunes and corruptions had their rise in the country.

Crime and crowding.

I may add another list to show the intimate connection between known crime and crowding.

ORDER OF COUNTIES ACCORDING TO COMMITMENTS.		ORDER ACCORDING TO DENSITY OF POPULATION.	
Number of commitments not very different.	Middlesex }	Middlesex	
	Lancashire }	Lancashire	
	Surrey }	Surrey	
	Warwick }	Warwick	
	Northumberland . .	Staffordshire . . .	
	Staffordshire . . .	Cheshire	
	Durham }	Durham	
	Kent }	Kent	
	Cheshire	Worcestershire . .	

I have passed over the three Ridings, because they are all confounded together in Yorkshire.

It will be seen that out of nine counties, six held the same places in both columns, besides Staffordshire which held nearly the same.

It appears then that commitments multiply with density of population: probably offences also multiply, but not in the same proportion. If any one should conclude that the farm labourers have a higher moral tone than the town mechanics,

I differ from him. Drop one of each in New York or Benares: the farm labourer untrained to resist temptation, falls into vice; the artisan, familiar with vicious allurements, is hardened to resistance. The Irish are mostly rustics, and at home commit few offences: emigrating to London or New York, they become notorious for drink and crime. In towns then, there are many opportunities for crime, many offences, great facilities for prosecution, many commitments: but most men overcome the temptations, and are raised in the moral scale by solicitations repelled.

Some desponding persons are afflicted with a fear that the nation is retrograding: that pauperism grows with riches; that together with knowledge, insanity increases; and that the spread of education is accompanied by augmented crime. This last notion was combated some years ago by that excellent judge of the matter, Mr. Barwick Baker.⁽²⁶⁾ Nation not deteriorating.

An anonymous writer, "Inquirer," had maintained on the strength of government figures, that crime was on the increase. Mr. Baker answered that Mr. Redgrave, who had compiled the returns, had cautioned readers against relying on them without the corrections which a knowledge of the subject would supply. To the Inquirer's remark that the daily average of county and borough prisoners had increased in ten years by 500, Mr. Baker answered that the population of the country had grown in the same proportion: and he might have said in a much higher proportion, since the population had grown by one-eighth, and the prisoners by only . . . one-thirty-second. "Inquirer:"
alleged
increase of
crime.

As to another remark, that the convicts in government prisons had risen in ten years from 5,500 to 8,500, Mr. Baker pointed out that this was a result of the abandonment of transportation: that the additional convicts were in the prisons instead of in the colonies.

Causes of
alleged
increase.

But, said Inquirer, the known indictable crimes were more by one per cent. in 1858 than in 1857; and during the one year, the summary prosecutions had grown by 30,000. I should have thought it sufficient to answer that a comparison of short periods proves nothing: that it is with crime as with mortality, which from month to month, and even from year to year in a small place, rises and falls capriciously, but for an average of ten years is tolerably steady. Mr. Sheriff Watson, an earnest investigator, believes that in prosperous times there are more cases of drunkenness and wantonness, but in times of adversity more grave crimes. This law however, is inconsistent with the case before us, since trade was slacker in 1858 than in 1857; and therefore 1858 should have had the fewer summary cases but had far more, and should have had an increase of indictable crimes far beyond the one per cent., which was only proportionate to the growth of population.

Mr. Barwick
Baker.

Mr. Baker however, assigned other causes for a general apparent increase. He said first, that one-half of the counties had only lately established a regular police; and that an early effect of an improved police was additional detection of criminals, thus causing a growth of known crime: it was in the newly policed counties that the increase of known crime had taken place.

He said further, that offences formerly overlooked, or punished by dismissal from employment, were now brought before the magistrates. He conceded that he could not prove this by returns of figures; but he appealed to the experience of skilled magistrates. I believe that this opinion is correct. I remember that in my youth, the Society of Friends refused to prosecute for forgery, so long as death was the punishment; and I know that humane men of whatever religious denomination, refrained in all but the worst cases from sending delinquents to await their trial for months, in gaols where imperfect organization and lax discipline corrupted the prisoners. The mitigation of sentences, the enlarged summary jurisdiction, and the improvements of prisons, have removed these objections, and have enabled employers to proceed judicially against crime, without conscientious dread of consequences.

More prosecutions.

Of course therefore, known crime has increased: but this fact does not justify the lamentations of those who believe that there is an increase in the crimes committed.

Inquirer had further reported that the returns "assure us of the *active organization* of a criminal population of 160,000; and that 16 millions £ yearly is lost to society by their depredations." Mr. Baker naturally asked where the figures came from, since the returns gave little over 40,000 "known thieves and depredators" at large. Again; why should we say that each of these criminals fraudulently appropriated £100 a year? Inquirer assumed that robberies great and small were committed by professional thieves and furnished these men's ordinary means of living.

Organization of criminals.

But Mr. Baker was assured by a Chairman of Quarter Sessions, that of the thieves brought before him during a year, not one lived by stealing.

My own experience points in the same direction. For many years, I had before me once a week, the daily police sheet of Birmingham; and for some time I carefully picked out all the cases which might be regarded as the work of persons living by crime: I found the number quite inconsiderable. As a manufacturer I have learnt the same lesson. I have taken deliberately into my service, several men who have been previously convicted, but who as I hoped were reformed. I have employed others who, as I knew would have robbed me if they could have done so with impunity, though such men generally go further afield than their master's premises. One of these men ended with a sentence of penal servitude: yet he did not live by crime; he worked for his livelihood and stole for his pleasures. Another, who had had four years for coining, complained to me that his was a hard case; for I knew, he said, how bad his trade had been, and how it had suddenly improved just at the time that want had driven him to crime: now if the regular work had come a month earlier, he would have refused the employment offered him as a coiner. He too, lived by industry, but he would rather sin than starve. The third case was more singular. A young man who worked for me, was sober and industrious: yet he entered into a conspiracy with two or three others to purloin some goods of mine, worth a very few pounds, merely for the purpose of getting a jollification during the coming Christmas. He had been convicted before of robbing an employer.

All these men, who lived and sinned within the range of my limited experience, were "known thieves and depredators;" and all lived generally by industry. Instead of stealing £100 a year, they probably would not steal £100 apiece during their lives.

Mr. Baker concluded thus.

"There are or were some two years since, in four particular localities of London, about 200 pickpockets, who averaged from £4 to £5 a week. There are a few housebreakers who do as much, and some coiners and smashers; but the number of these is rapidly decreasing; and within the last five years the number that stole £2 a week has been very small. Certainly but a very small portion of the known thieves live by crime, and I know that many of them live very poorly."

Some strange inferences have been drawn from figures as to known and suspected criminals.⁽²⁷⁾ It has been gravely maintained that where there is the least crime there are the most criminals. Here is the basis of this paradox.

In 1858 it was found that the criminal classes abounded most in the hardware towns, . . .

. . . being to 1,000 of population, 21

2nd. In rural towns " " 13

3rd. In the commercial ports " " 11

4th. " pleasure towns " " 10

5th. " small textile towns, " " 9

6th. " cotton towns " " 7

7th. " woollen towns " " 6

8th. " metropolis " " 5

The public was asked to believe that a great cotton town such as Manchester, had only a third as many criminals as a great hardware town such as Birmingham; and that a great commercial port such as Liverpool, had only half as many criminals

Not £100 a year each.

Crime and known criminals: the great towns:

as Birmingham. Yet as I have shown elsewhere, the commitments in Manchester are half as many again as those in Birmingham; and I need not stop to prove that as regards offences of every kind, Liverpool is the opprobrium of the kingdom. London again, which is preëminent in crime, is represented as having one-fourth of the criminals that are found in Birmingham, where a comparatively low rate of crime prevails.

London and
the southern
counties.

Mr. Baker made a comparison between London and the southern counties: he found that according to these returns, the thieves were more numerous by half in the quiet agricultural districts than in the metropolis.

Drunken-
ness.

Then again; where you have a large criminal population, you may fairly expect much drinking. Look at these figures, published in Liverpool, by a Sub-Committee on Mortality, in 1865.⁽²⁸⁾

Number of drunken cases determined summarily by the justices: to every 10,000 of the population.

In Hardware	{	Birmingham	43
Towns	{	Sheffield	51
		Halifax	57
		Rochdale	81
		Leeds	83
		Manchester and Salford . . .	86
		Liverpool	303

The two principal hardware towns, represented as harbouring the greatest number of criminals, have the least drunkenness. Manchester and Salford, with twice the drunkenness of Birmingham, and more crime by one-half, are represented as having only one-third as many criminals.

Such reports ought not to have been published. Their absurdity was so glaring, that the police received fresh instructions as to making the returns.⁽²⁹⁾

Police
instructions:
great
reduction.

A few years later, the number of known thieves and depredators appeared to be reduced by two-fifths; (42 per cent.) At first, the police had included in the list all who had been once convicted: afterwards they were instructed to omit such as they knew to have been living by honest industry for a year.

These facts partly explain the mysteries. In the enumeration of known criminals, London was at the bottom of the black list: and naturally, since in so monstrous a city the police could not know the convicts: the rural towns were very high, because in them every offender was known. Why the great hardware towns should have been placed at the top of the black list, remains a mystery: perhaps the chiefs of their police were willing to exhibit unusual zeal. In the returns of 1865, the hardware towns instead of being at the top, are below the pleasure towns and the commercial ports, and are on a level with the rural towns and the woollen towns. Even in this later list, London still occupies the most favourable place: exhibiting the hopeless ignorance of the metropolitan police.

Explanation.

In my opinion, such lists ought not to be given; because they are nothing better than Conjectural or Tentative Statistics. That so many persons have been dealt with summarily and so many indicted, in Liverpool, London, Birmingham, and the whole country, are unquestionable facts: that in the same districts, a certain proportion of former convicts have been living by honest industry for a year, is at

Returns
condemned.

the best, an approximation; and at the worst, a conjecture. The Chief of Police is in one place young and burning with zeal; in another, old, weary of his duties, procrastinating. One Chief will say, I don't know that Jones has been living honestly, so I will set him down: another will say, I presume that Jones has been living honestly, so I will omit him. One Chief thinks he shows his zeal by making out a long list of resident criminals: another humours the Watch Committee or the magistrates, in their wish to put a fair face on the borough. In short, these statistics rest on the varying fidelity, zeal, and judgment of the heads of police. They are also much influenced by the size, density, and moral character of different places: who can pronounce on the history of every person in Bethnal Green, or Shoreditch, or in the disreputable haunts of Liverpool, into which a well-dressed man can scarcely venture to go?

Manchester
protest.

I was not surprised therefore, to find that the whole subject had lately engaged the attention of the Manchester authorities.⁽³⁰⁾ A local politician had been misled into the notion that these Discretionary Statistics were trustworthy; and on the strength of them he had publicly maintained that the Manchester police force was inefficient. The City Council appointed a sub-committee to investigate the charge; and a report was made attacking the returns much as I have done. The sub-committee found that the police instructions from the Home Office as to making up the returns of crimes committed, allowed considerable latitude, and that apparently in no two places were the returns the

same: that in Manchester many offences were included which other places omitted: that in Liverpool crime was set down in a way peculiar to that borough; partly through the way in which the justices exercised their authority, and partly through a different mode of interpreting the Home Office instructions.

In preparing a return of crimes said to have been committed, the police are instructed to enter only such cases as *in their judgment*, from the circumstances attending them, would if discovered be sent for trial. The absurdity is shown by this result of 1866.

In the judgment of the police.

HIGHWAY ROBBERIES.

Liverpool .	56 cases,	10 apprehensions.
Manchester	217 ,,	136 ,,

We are asked to believe that Liverpool, with a singularly lawless seafaring population, has fewer highway robberies than take place among the comparatively quiet factory hands of Manchester.

So much for the Discretionary Statistics of the Police. I agree with the conclusion of the sub-committee, that the criminal tables are valueless for the purpose of comparison.

Many persons have an exalted notion of the excellence of our administration of justice; they are not aware of the great number of accused persons who are acquitted on trial. I have kept a record of the business of the Birmingham Quarter Sessions, presided over by the Recorder: these are the figures.

Number of prisoners acquitted.

From January, 1866, to January, 1869, ($3\frac{1}{4}$ years).

Criminal Cases	1137	
Bills ignored by the Grand Jury	27	} = 247
Acquittals	220	
Convictions	890	

It seems then, that out of 1137 persons sent by the magistrates for trial . . . 247 escaped punishment.

This is nearly . . . 22 in the 100, or more than one-fifth. The proportions varied a good deal at different sessions: from 13 per cent. to 31 per cent.

The average 22 per cent. is a considerable proportion: but it is lower than that which prevails through England and Wales, which is about 24 per cent.

Nor have we any reason to attribute the greatness of this number, to any peculiarity in our administration, or to our tenderness towards criminals; since France exceeds us in the number of acquittals.

Greater in
France.

Authority.

FRENCH ACQUITTALS IN CASES AGAINST PERSON OR PROPERTY.

1. The highest rate was between 1831 and 1835 . . . 43 per cent.
2. Between 1826 and 1830 it reached 39 „
3. Between 1846 and 1850 „ 37 „
4. Between 1856 and 1865 (10 years) it fell to . . . 25 „

Even the present 25 per cent. rather exceeds our rate; but from 1831 to 1835, nearly half of the accused were acquitted. We know how unscrupulously the French authorities labour to surprise prisoners into confession: a remarkable result being lately obtained in the case of a girl accused of concealing the birth of her child, and of throwing the body to the pigs. She confessed, was convicted, and sen-

tenced : two months later the girl gave birth to the child already eaten by the pigs. The apologists of French courts, and of the practice of the judge's interference, say that the preliminary investigation in France is so thorough that the persons sent for trial are certainly guilty, and all means are fair to prove their guilt. The great number of acquittals contradicts this allegation. It would look as though the preliminary examinations were less strict than ours. It is noticed that our Stipendiary Magistrates are more ready to commit prisoners, than are our Great Unpaid : the more official character of French preliminary investigations may account for the same readiness.

Those optimists then, who have regarded our administration of justice as nearly perfect, must make some abatement from their estimate, when they recollect that to convict four guilty, we try one who is declared not guilty. No doubt many of the acquitted are guilty : they escape because their guilt is not proved. Many persons believe that nearly all of them are guilty, but I do not share that conviction. Watching for years the processes by which magistrates and their clerks determine the question, shall this person be sent for trial, I have seen clearly that numerous mistakes must be made : the greater number on the side of mercy, but many on the side of severity.

The really innocent.

Any one who reads the police reports, must be convinced that in crowded courts there must be much of a rough and ready administration. Here is a

London case of a boy.

ludicrous example. In a London Police Court, a boy named Hayes was waiting as complainant in an assault case. A policeman seized him, forced him into the dock, said that his name was Bagnell, and that he was charged with letting off fireworks in the street. The case was proved by two policemen, who swore that they had seen the offence committed by the accused. The protestations of the boy were disregarded by the stipendiary, and he was convicted. In the course of the morning the mistake was discovered. But where such a blunder was possible, what may we not believe as to more serious affairs!

V.

Vital and
sanitary
statistics:
recapitu-
lation.

IN Section II, I gave some miscellaneous examples of lies of Vital Statistics. I illustrated the dangers of private and unassisted investigation, by the examples of two physicians: one of whom by a series of miscalculations made small county towns appear as unhealthy as great manufacturing towns: while the other much more venially drew an inference which seemed obviously true; an inference from a comparison of marriages and births, that the Manchester wives were afflicted with barrenness. I pointed out the error of those who desiring to estimate the healthiness of a place, inquire the ages at death, and decide on the healthiness by the apparent longevity of the inhabitants: forgetting that in a fast increasing place there cannot be many old people to die; and overlooking the fact that a newly built street will be likely to have an undue proportion of recently married couples, and of young children,

among whom, however healthy they may be, numerous deaths are inevitable. I remarked upon a frequent over-readiness in arriving at conclusions from short periods of time; as exhibited by the Social Science Association at their meeting in Birmingham in 1868; when a prevalent epidemic had raised the death-rate far above its usual moderate level; with this final result, that the death-rate for the whole year was rather under the average, in consequence of the singular healthiness of the borough during the other months.

I showed that constituted authorities have sometimes misled the public: as for example, when a Commission declared that in the Indian army the death-rate during a long period had been extravagantly high: neglecting to say that they spoke of a period when the troops had been generally employed in the field, and had therefore been exposed to the losses caused by hard fighting, hard marching, and hard living.

I remarked upon the Irish registration: which during the few years of its existence has proved to us, if it has proved anything, that the rates of births, of marriages, and of deaths, are vastly lower in Ireland than in England or in Scotland.

I commented on the acknowledged fact, that the births of boys are considerably in excess of those of girls. I gave my reasons for believing that part of this difference is only apparent; and follows from a rather better registration of boys, in consequence of the greater importance often attaching to the birth of a son. I suggested that since in the case of illegitimate children the birth of a boy is of no

more importance than the birth of a girl, in the eyes of the mother who has to establish the paternity, or in the eyes of the father to whom neither is an heir, there is probably no better registration of illegitimate boys than of illegitimate girls. I have assigned this as an explanation of the apparent anomaly, a subject of many learned disquisitions, that illegitimate boys are not so much in excess of illegitimate girls, as is the case with legitimate children: the difference being really one of registration.

I will now devote a few more pages to the topic of Vital Statistics: I will enumerate some authoritative errors, first of figures, and then of inferences.

First census. Great Britain was not at all forward in publicly dealing with this subject. Dr. Price indeed, and other private persons, published some records in the last century, and constructed some tables as a foundation for life insurance: but our government rendered no assistance. An effort was made⁽³¹⁾ towards the close of Geo. II's reign (1753-4) to take a census of the population: but the bill to effect this was thrown out by the House of Lords, and principally by the votes of the Bishops. Did the prelates fear the curse attending the numbering of the people by David? The first actual census took place nearly half a century later (1801), at the instance of Speaker Abbot (Lord Colchester) the son of Jeremy Bentham's stepmother. Probably, Bentham's considerable influence with Abbot, ought to have part of the credit of the measure.

This census was a very important beginning : but thirty-five more years passed before we got a register of births, marriages, and deaths. Sweden⁽³²⁾ was almost a century before us : having in 1748 taken a census, and at once commenced a register of "Marriages, Marriages dissolved by death, Children born alive, Deaths male and female;" besides "Causes of death, Quality of harvest," and many other particulars. This register has been continued and published ever since. Swedish statesmen, it seems, feared depopulation, through repeated famines and pestilences ; fears shared as to England by Dr. Price and others, and echoed by Goldsmith.

Births,
marriages,
and deaths.

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay:
Princes and lords may flourish, or may fade,
A breath can make them, as a breath has made;
But a bold peasantry, their country's pride,
When once destroy'd, can never be supplied."

Alleged
depopulation.

In Sweden, these alarms caused the compilation of the valuable Statistics I have mentioned : in England nothing was done until Malthus had substituted the bugbear of over-population for that of depopulation. I do not censure the Swedish fears ; for I find that among many ill-fed and ignorant races, the deaths of children are so numerous as really to prevent the increase of a nation : as for example, in parts of Russia quite lately, a reward offered to any couple who had reared six children was seldom claimed : nor can we wonder at this when we learn that infants with smallpox were kept as hot as possible, and infants with measles are exposed to the cold. So in Sweden

Infantile
deaths.

we find deaths of infants very numerous 100 years ago, but gradually reduced.

Deaths of Swedish infants under 1 year old, 1755-60

21 to 23 per cent. of all deaths.

The same, a century later . about 16 per cent.

Deaths in the second year of life, 1755-60 . . .

6 or 7 per cent. of all deaths.

The same, a century later . about 4 per cent.

Benefits
from our
registers.

In 1836 however, England set about the task of rivalling Sweden in Vital Statistics. If, before I point out errors committed, I am asked what good has followed, I reply that at any rate we have gained certainty in cases before unknown or only conjectured; and in some cases the evils discovered have been corrected or mitigated. Liverpool was formerly spoken of as a healthy town: it has turned out to be a vast seat of disease and death. We know unquestionably, that great towns generally, have a death-rate half as high again as that of rural districts. In the case of our soldiers, we not only discovered a frightful condition of ill health, but we took active and well directed measures for remedying this, and not without success. The registers had furnished us with a standard; by means of which we could say that the deaths of other Englishmen of soldiers' ages were only half as many as those of the soldiery: that is, that our troops were dying twice as fast as they ought. In a few years that high military rate has been greatly reduced. A similar comparison is reforming the sanitary arrangements of our Indian army. If therefore, I point out errors, I do not mean to deny the importance of what has been done.

Of commonly received mistakes in Vital Statistics, one of the most usual is that respecting the deaths of young children: it is really believed by men who are almost experts, that in great towns, half the children born die under five years old. So far is this from being true, that it is not true even of Liverpool; not true even of the parish of Liverpool, the worst of our great registration districts. The Registrar-General is not in the least responsible for this mistake. I suspect that it has arisen at first from a confusion of two distinct propositions.

Children's
deaths:
fallacies.

1. That in a particular place (as it is alleged) half the children born die under 5 years old.
2. That in a particular place, half the deaths are those of children under 5 years old.

Now, as I have already shown, in an asylum for young children, all the deaths might occur under 5 years old, although the asylum were a healthy one. But the great and fast increasing towns, resemble such asylums, because they have an unusual number of young children: they will also resemble them in having an unusual number of children's deaths. A particular town then, may have half its deaths under 5 years old, without being thus proved to be an unhealthy town. But to say of any town that half its children born die under 5 years old, is to say that as regards children it is singularly unhealthy.

The only way to settle the question, is to take the births of each great town, and the deaths under 5 years old of the same town. I formerly went through this process, and obtained these results.

Of the children born, those who died under 5 years old, were—

Throughout all England about a fourth.
 In Birmingham „ a third.
 In Manchester less than two-fifths.
 In Liverpool (apparently) „ half.
 In Liverpool (after due correction
 of births) about two-fifths.

These figures show the exaggeration of the statement that in great towns generally half the children born die under 5 years old.

Yet it seems useless to contradict it, since it constantly reappears. So lately as June 1870, I find in one of the best-informed morning papers, an assertion even more grossly untrue. “We know that the large majority of children born in this country die before they reach the age of *two* years.” Five years was bad enough: what shall we say of two? I should have suspected a misprint of two for ten, but that the subject under discussion was “infant mortality,” while children under ten are not called infants except in legal phraseology.

Deficient
 registration
 of births.

I have said that the Registrar-General is not the author of this mistake. I must also say that he is not blameable for other mistakes, though they appear in his columns. He gives us the numbers of births, marriages, and deaths which are registered: he has certainly taken reasonable pains to have them accurately registered. It is believed that he has attained to something like exactness in the case of *marriages* and *deaths*: such events being surrounded with many formalities, and being recorded by clergymen and undertakers, under the threat of penalties.

The registration of births is not secured by such means; but an officer is paid to search for himself, with the inducement of a fee for success. An indolent, negligent, valetudinarian officer will drop many births. After a laborious calculation I lately made, I concluded that in Liverpool between 1851 and 1861, a great many thousand births were omitted from the register. Even through the whole country there are still considerable omissions, and thirty years ago there were still more. I have estimated that they amounted—

From 1841 to 1845, to	.	13	per cent.
„ 1846 to 1850, to	.	11½	„
„ 1851 to 1855, to	.	9	„
„ 1856 to 1860, to	.	6	„

It is a matter of complaint by the Registrar-General, that parents are not compelled by law to register every birth.

Just as in the registration of births, so in the enumeration by the census, I believe the numbers recorded to be under the truth. We are all familiar with the visible machinery of the census; and the concealed machinery is explained in the third volume of results, attested by the signatures of the Registrar-General, Dr. Farr, and Mr. Hammick. The English practice is to fix on a particular night, such as the 7th April 1861, and to ascertain the number of persons who slept in every house, making additions for the occupiers of tents, boats, or caravans. A schedule was left at every house during the preceding week, with instructions to fill it up on the following

Deficiency
in Census.

Monday, when an appointed enumerator would fetch it. It was the business of this man to call on that day at every house in his district, to demand the schedule, to see that the entries were properly made, and if necessary to help in making them.

How it
happens.

Now in the millions of papers which had to be filled up, and this often in haste, there would certainly be some mistakes. I have heard it contended that these would probably be as much in excess as in defect, and would balance each other. But it cannot be maintained that in all voluminous returns the mistakes balance each other: for example, in Schedule D of the income-tax, some persons, as it has been proved, pay much less than they ought, many pay less, and a very few pay more: on the whole, the returns are far below the truth. I believe that in the census too, the errors are mostly omissions. It has been suspected indeed, that as the enumerators are paid by the number of names they collect, they may add some fictitious ones: this fraud has been practised in a few known instances by the registrars of births; but these persons could concoct their lists privately and at leisure; whereas the census enumerators, having to supply the name, relation, civil condition, sex, age, occupation, and place of birth, and to hand in at the close of the day each of them 200 papers, would have to be remarkably smart to invent persons not existing. On the other hand, some families would be out: the enumerator making a second or third visit, would have the schedule filled up hastily, with imminent danger of omitting a child, a lodger, or a casual visitor: in the country, houses lying widely out of the

regular beat, would be overlooked. At Bradford, as I have already mentioned, a second enumeration made by the local authorities, gave 453 additional houses in a total of 22,452; or 2 per cent. An eminent statistician said to me when I was busy with this topic, that there could be no doubt as to the census being under the mark, the only question was how much it was under.

Now of late years, since the continued registration of births and deaths, we have the means of testing the accuracy of the census as to about half the population, that is as to all persons up to 21 or 22: for we know the number of children born since 1837, the number of persons who have died in each year of life, and the number who have emigrated. From a calculation founded on these data I concluded, in a paper read before the London Statistical Society, that the numbers given by the English Census were too few by half or three-quarters of a million, that is by at least $2\frac{1}{2}$ per cent., or perhaps as much as 4 per cent. If we imagine Bradford to be a fair sample, and the deficiency of enumerated houses to be therefore 2 per cent., it would follow that the 4 per cent. deficiency would be equally divided between persons and houses: that every 100 houses were set down as 98, and every 100 persons in the houses visited were set down as 98.

How can be
tested.

I do not complain of the census: I regard it as an operation successfully accomplished. I have not even any wish to see it better done hereafter: for what we principally want to know is our rate of

Not
desirable to
perfect the
Census.

increase; and compared with this it is a small matter whether England and Wales in 1866 contained 20 or 21 million souls. Now if the census were taken better next time, our rate of increase would appear too high, and might be exaggerated from a real 12 to an apparent 14 or 15 per cent. I hope the census of 1871 will be taken just as that of 1861.

The French
mode.

The French, I see, adopt a more leisurely process: taking weeks or months to collect all their returns, and recording the ordinary dwelling place of each person, instead of the accidental distribution of sleeping places on one particular night. Probably they may attain as much accuracy as we do.

Means of
checking
statements.

Any one who is inquisitive on this subject, may check the English results I have given, by turning to a long and careful paper⁽³⁴⁾ by General Balfour, on another subject, in the *Statistical Journal* (30, 228). He will there find an estimate of the number of men whom we ought to have of a fit age to be soldiers. Comparing the census, and making allowance for imperfections of birth-registration and for recorded emigration, he may judge how far my criticism is well founded.

Registration
districts,
ill chosen.

Another imperfection in our registers, though it is not an error in figures, leads to many false inferences. When the Registrar General began his work more than thirty years ago, it was necessary to form districts of a manageable size. The country was already cut up into parishes, towns, boroughs, and cities: these appeared natural

divisions, since the inhabitants of each parish or town would desire to know its sanitary condition, as well as the number of marriages and births occurring in it: the inequality of size would of course lead to difficulties requiring a good deal of arrangement at first.

Another division already made, that into poor-law districts, was tempting by requiring little trouble in the way of arrangement; and so it was adopted. Unfortunately, this division had nothing to recommend it for registration purposes, but its facility and cheapness at starting: it split up homogeneous populations, and threw together those that were heterogeneous: it cut off from one great town all its healthiest portions, and gave it an unfair appearance of high mortality: it added to another town a large slice of the adjacent country, and flattered it with a nominal death-rate far too favourable.

I am not aware how soon this faulty arrangement was protested against. In 1856, when I first took up the subject, I found what great inconvenience was caused: for wanting to compare the mortality of Liverpool, Manchester, and Birmingham, I found registers of only the parishes so named, and no registers of the boroughs. The next year, in a note to my *Economy of the Labouring Classes*, I stated the difficulty.

My protest
1856.

In 1859, at the third meeting of the Social Science Association, Dr. Rumsey of Cheltenham reiterated these complaints. He related how in an investigation of the sanitary condition of the city of Gloucester in 1848, he found it impossible to collect the necessary

Dr.
Rumsey's
1859.

figures from the published tables, and had himself to make abstracts from the local registers, to which he got access as a favour.⁽³⁵⁾ He said that at Croydon, Dr. Alfred Carpenter was indebted to Mr. Westall for his figures, which unfortunately did not agree with those of the Registrar-General. He quoted from Mr. Michael of Swansea :

“The present areas of registration are absurd. It is a work of the greatest labour to eliminate (extract) from the returns the rate of mortality of any given town or borough. For example, Swansea is in the domains of three registrars, each of whom registers deaths *partly within and partly external to the borough*. No one therefore could know what the actual rate of sickness and death was at any time but by carefully examining every entry, and this is not permitted. As a special act of grace, I was permitted to do so, when an officer of health for Swansea.” “Dr. Gardiner has lately asked me to account for discrepancies in the apparent mortality of Swansea and Merthyr. The return from Swansea includes a population of 7,000 in Llangafelach, 4 miles from the town, and far beyond the borough boundary. The return for Merthyr includes Aberdare and Gellygaer, from 4 to 7 miles off, and separated from the town by a high mountain ridge.”

The Liverpool people again, were very angry at some strictures of Dr. Headlam Greenhow on their bad sanitary condition : they complained that only a part and that the worst part of the borough was represented by the Registrar-General as “Liverpool.”

No improve-
ment.

Nothing came of these complaints : nor was it easy to say what could be done ; for the country having been once divided into 623 districts and into three or four times as many sub-districts, and each of these divisions having for years recorded its births, marriages, and deaths, to adopt a new classification would be to supersede nearly all that had been done, and to throw difficulties in the way of comparisons of the past and the future.

In 1864 however, I made another attack, and fairly bearded the lion in his den, by offering a long paper on this subject to the London Statistical Society. Every one who is familiar with that valuable association, knows that a great number of its more active members belong to the civil service; and that the Registrar-General's department is strongly represented by Dr. Farr and his friends. When I tendered my paper, "On certain Results *and Defects* of the reports of the Registrar-General," I anticipated a storm, and it came. I find from a note which I made at the time, that after reading my article to the society, "I was abused as I was never abused before." I was sneered at by one as the "worthy alderman;" and another said that my paper was unfit for publication by the society. For an hour or more the storm raged. But as it happened, I had in my younger days been a member of several debating societies, and I had become hardened to the pelting of words. I was perfectly able in reply, to exhibit the contempt I really felt for such unreasoning official petulance. I began by saying that this was not the first hornet's nest into which I had fallen; and that I was familiar with the ordinary official maxim addressed to outsiders, *procul, O procul este, profani*.

My paper
1864.

Dr. Farr I suppose, was ashamed of the tone of the debate, though given by himself: for after my reply, he stood up and conceded a certain value to some of my suggestions, promising that they should receive full consideration in the office: a few days later he wrote to me politely. Yet at the instigation of the malcontents, the Council of the

society required me to shorten my paper: I asked which part I should cut out: all was published.

Present
borough
returns.

Since that time, the districts and sub-districts remain of course, as before. But we get the borough mortality in another form; I mean in the weekly returns given by the newspapers: these are the returns of boroughs and not of conventional poor-law districts; "Birmingham," for example, not being the parish only, but the parish plus Edgbaston and parts of Aston, and thus including all classes of society.

Death-rate
from persons
left alive.

Among other criticisms in my paper of 1864, was one on the mode often adopted in calculating the death-rate, from the number of persons *left* alive, instead of from the whole number who have been exposed to the risk of death. If 1,360 new-born infants were placed in an asylum on a certain day, and if at the end of five years their number had been reduced by death to 1,000, the quinquennial death-rate would be 360 in 1,360, or 265 in 1,000: but the mode I condemn calls it 360 in 1,000. The Census would show only 1,000: the death register would show 360; and the death-rate would be reckoned from these two as 360 in 1,000. The Registrar-General seems to have sanctioned this error (iv. 17). "If the living at different ages had been enumerated in the middle of the year (1st July, 1841), and if we had the deaths at the same ages in the year 1841, the division of the number of deaths at each age—by the number living—would show without further trouble the annual mortality at every age." I say that the division should be by

the number living plus the number who have died. The error is small as regards the whole population: for if out of 1,023 persons of all ages 23 die annually and leave 1,000 living, it makes little difference whether we call the national death-rate $\frac{23}{1000}$ or $\frac{23}{1023}$; that is 23 or $22\frac{1}{2}$. But the error is more considerable as to infants, whose deaths are far more numerous: for if out of 1,160 born 160 die annually, the one mode will make the death-rate $\frac{160}{1160}$ 160 in the 1,000, the other mode will make it $\frac{160}{1160}$ 138 in the 1,000.

Another comment I made, had reference to the comparative death-rate of the two sexes. The Registrar-General had committed himself to the opinion that the female rate was the more instructive as to the sanitary condition of a place, because the deaths of males were often caused by their occupations. I pointed out that this argument disregarded the fact that the female occupation of domestic service, to say nothing of the manufacturing demand, greatly disturbed the tables, by causing a great migration of young women.⁽³⁶⁾ The proportions of the sexes living vary wonderfully in one place and another.

Male and
female
deaths.

Excess of females living of all ages:

In Sheffield	0 per cent.
Throughout England and Wales	5 "
In Birmingham	5 "
„ Manchester, Salford, and Bradford	11 to 15 "
„ St. George's, Hanover Square	34 "
„ „ „ „ women over 20 years old	44 "
„ Leamington, of all ages	43 "
„ Edgbaston	45 "
„ Clifton	73 "

Disturbance
by domestic
servants.

Now the greater part of this excess of females, is owing to the predominance of domestic servants: who are to a great extent immigrants from the country; commonly of very healthy ages; with the sickly members of the class left at home; and scarcely any of them allowed to die in service. I conclude that in consideration of this extensive disturbance, it is safer to look to the male death-rate to determine the sanitary condition of any place.

Town and
country.

Important inferences have been drawn from a comparison of town and rural registers. The great fact long conjectured, was soon proved. At the end of a few years, the Registrar-General gave a chapter (v. 406) on the "causes of the high mortality of town districts." First he showed that comparing a town and a country population of equal numbers, the deaths were

as	.	.	.	.	.	.	.	362,176
to	.	.	.	.	.	.	.	262,414
Town excess								99,762

The town deaths were to those of the country as
140 to 100.

Anticipated
immeasurable
reduction.

He asked the obvious question: Is this frightful excess capable of reduction? The report says, in another part of the same volume (v. 47): "The disparities in the rates of mortality, . . . in towns and parishes where the climate and soil are nearly the same, must awaken attention, and prove that the present excessive mortality is *not inevitable*." And again (v. 426): "The mortality of cities in

England and Wales is high, but it may be *immeasurably reduced*. A good, general system of sewers, the intersection of the dense, crowded districts of the metropolis by a few spacious streets, and a park in the east end of London, would probably diminish the annual deaths by several thousands, prevent years of sickness, and add several years to the lives of the entire population."

But the supposed causes of high mortality are set out more elaborately. First, as to what are not the causes. (v. 412.) Carbonic acid, though much is generated, is not a cause: carburetted hydrogen and sulphuretted hydrogen arising from graves, are not causes: smoke, though irritating to the air-passages, and tending to pulmonary disease, will not produce the prevalent diseases of towns. So says the appendix to the report. Further experience has shown that pulmonary diseases do prevail in towns and much increase the mortality: it is also now maintained that though smoke is comparatively harmless, yet carbonic oxide and other gases produced by combustion or by manufacturing processes, are present in the air of great towns in sufficient quantities to be very injurious to human life and in some cases to destroy vegetation.

Alleged
causes.

The Appendix however (v. 419), treats the matter as a very simple one. "The people live in an atmosphere charged with decomposing matter of vegetable and animal origin; in the open country it is diluted, scattered by the winds, oxidized by the sun; vegetation incorporates its elements, so that, though it were formed, proportionably to

Decom-
posing
matter:
sedentary
occupations.

the population, in greater quantities than in towns, it would have comparatively less effect. The means of removing impurities in towns exist partially, and have produced admirable effects; but the most casual observation must convince any one that our streets were built by persons ignorant as well of the nature of the atmosphere, as of the mortality which has been proved to exist, and which is referable to causes which, though invisible, are sufficiently evident." A just remark was made as to town and country occupations: the agricultural labourer passing his days in the open air, the mechanic in a close workshop. The importance of this distinction however, is often exaggerated, because it applies but little to women; and because the excess of town deaths is very much among children under 10 years old.

Sun and air.

On the whole, the Registrar-General echoed the cry of sanitary reformers for more sun and air: but any rapid widening of streets is prevented by the ruinous cost; and the tendency in all great towns is to diminish the quantity of sunlight, by raising the houses as ground becomes more and more scarce.

Sewering.

Sewers however, might be made, and nuisances might be abated. The country took up the cry, and in a few years great sums of money were expended. That a vast extent of sewerage was done, is proved by the lamentable condition into which our rivers have been brought by receiving the liquid filth.

Mortality
1841-50 and
1851-60.

The report I have quoted, was published in 1843; and between that year and 1850 there was a great

stir among town councils. But many arrangements had to be made: money had to be borrowed; and the work accomplished could not much affect the death-rates before the census of 1851. But it was anticipated that between 1851 and 1861, there would be a great reduction of deaths.

Now, let us look at the figures.

Death-rate of England and Wales; 10 years, 1841-50—22·28, say $22\frac{1}{4}$.
10 years, 1851-60—22·24, say $22\frac{1}{4}$.

It is very well to say that but for the remedial measures the death-rates would have increased. I know no reason however, for supposing that they would have increased in the rural districts. And as to the towns, where was the fulfilment of the magnificent promises of improvement? Failures.

DEATH-RATES OF TOWNS IN THE TWO DECADES.

	1841-50.	1851-60.
London	$24\frac{1}{2}$	$23\frac{3}{4}$
Birmingham <i>Parish</i> . .	$26\frac{1}{4}$	$26\frac{1}{2}$
Manchester „ . .	33	$31\frac{1}{2}$
Liverpool „ . .	39	33
Leeds „ . .	$29\frac{1}{2}$	$27\frac{3}{4}$
Sheffield „ . .	$26\frac{1}{2}$	$28\frac{1}{2}$
Bristol „ . .	$28\frac{1}{2}$	$26\frac{3}{4}$
	<hr/>	<hr/>
	$207\frac{1}{4}$	$197\frac{3}{4}$
Or omitting Liverpool . .	$168\frac{1}{4}$	$164\frac{3}{4}$
Average . .	28	$27\frac{1}{2}$

I say omitting Liverpool; because the rates in the first decade were unnaturally swollen by the prevalence of cholera; and by the deaths of Irish not belonging to Liverpool, but who were driven across

by the famine in 1846, &c., and died in Liverpool by thousands. No one will pretend that the Liverpool improvement was caused mainly by sanitary measures; and in the other great town parishes all that was done was a reduction from 28 to $27\frac{1}{2}$. Sheffield parish got worse; Birmingham parish was about stationary; Manchester, Leeds, and Bristol improved. These trifling changes were far from fulfilling the promise that the mortality should be *immeasurably* reduced; taking into account too, that the mortality of the whole kingdom was stationary. I am sorry to add that since 1861 there has been no approach towards an immeasurable reduction.

Water
supply,

Sewerage then has failed; though I do not regret the millions laid out, because the towns are sweeter, and rather less unhealthy. After the failure became too manifest to be denied, the public attention was directed to the water supply: if we could but give the towns pure and soft water, and plenty of it, we should have a chance of swilling away the germs of disease. It was well known that particular families had been poisoned by wells into which foul drains had found their way: might it not be assumed that poisoning in a less degree was going on in towns generally, supplied with pump water exposed to such contamination?

has failed.

Manchester and Liverpool constructed great works at the public expense, though not to furnish water gratuitously: Birmingham, Bristol, Sheffield, provided for the want by companies. After some years' experience, we cannot say that the purer water has

reduced the mortality. The most remarkable case however, is that of Glasgow, into the streets and houses of which Loch Katrine has been poured. When the communications were completed, and the water came rushing in with even unexpected freedom, there was great glorification. Not only was mortality to be immeasurably reduced, but the citizens were to be enriched with savings effected by the use of such soft water. Of the soap economized we have no public account. As to the more important matter of the death-rate, I had lately the opportunity of conversing with the eminent head of the Glasgow health department, Dr. Gairdner. He gloomily related the things done: sewers made, nuisances removed, soft water abundantly supplied: and the result? a death-rate steadily increasing.

With respect to the qualities of water, experience has shown that sanitary notions were at fault. There is no reason for believing that perfectly soft water is desirable: there is reason for suspecting that it is positively unwholesome. The less organic matter the better: perhaps the less inorganic matter of certain kinds the better: but lime in some form and in small quantities is apparently useful. A comparison of the water with the death-rates of several towns is in conformity with this opinion, though it does not prove its truth. Thus, the healthiest great town is Bristol; the water is exceedingly hard: Birmingham stands next (ages and classes of society considered); the water is hard: then comes London, healthy, with hard water. On the other hand, Glasgow and Manchester are

Soft water
of doubtful
efficacy.

notorious for unhealthiness; they have soft water: Sheffield has a high death-rate, with soft water. Certain medical authorities lately employed, say: ⁽³⁷⁾ "In Glasgow, Manchester, Salford, and Sheffield, the quantity of solid saline matter in the water was very small, amounting in the two first towns to about 4 grains per gallon, and in the last to 5 grains. In these towns the death-rate during the year 1861 was, in Glasgow 27·1 per 1,000 of population, in Manchester and Salford 28·7, and in Sheffield 26·2; in Birmingham on the other hand, the solid matter in the water supplied amounted to 37 grains per gallon," (8 or 9 times as much) and in the water of Sunderland and South Shields it amounted to 30·5 grains; in the former of these large towns the death-rate was 24·4 per 1,000, and in the latter only 20·7." That is:

	Grains of Solid Matter.	Death-rate 1861.
Glasgow	4	27
Manchester	4	29
Salford	5	29
Sheffield	5	26
Birmingham	37	24
Sunderland and South Shields	30½	21

I do not pretend that this proves the wholesomeness of hard, or moderately hard water: but it does not contradict the opinion that such water is wholesome; it even lends some support to that opinion.

What then? If I am asked, what then is the cause of the
Higher very high rate of mortality in some towns, such
civilization.

as Liverpool, Manchester, Glasgow, I answer that after so many examples of failures in laying down laws, any opinion is worth little. That manufactures are not the only cause is obvious from the high mortality of Liverpool, which is not a manufacturing town. Dr. Gairdner casually threw some light on the subject, in the conversation I have mentioned. He had been taking a round of the lowest streets of Birmingham, streets mean and squalid enough in appearance. He had asked his guide to show him the houses let out in single rooms, and when he was taken to one, he found that it was a common lodging-house. He explained that he wanted to see the houses where each room was tenanted by a family. He was told that such crowding was unknown. Compare this he said, with what you find at Glasgow, where 30,000 souls at least are lodged in this miserable fashion: one room to a family. What can sanitary precautions effect? The evil is not only that the vitiated air causes disease: there is the far greater evil that the population living to-day in such a fashion, shows itself to be scarcely civilized; and that an imperfectly civilized people, living among the temptations of a great town, is sure to be coarse and sensual in habits: the parents improvident and drunken; the children dirty and neglected; the sick ignorantly treated. In the best of manufacturing towns, the mothers too much fail in their duty: what must they do when they drink, and crowd together as in pigsties?

If any one desires to pursue the subject, he may advantageously study the able address of Dr. Rumsey at the Social Science Meeting of 1868.

Consult
Dr. Rumsey.

The address will be found among the Transactions of the year. Dr. Rumsey has long thought, and thought independently, on sanitary questions: he has taken every opportunity of exposing the Lies of Sanitary Statistics.

PART II.

VI.

THE Lies of Statistics then, are like the sands on the sea shore, innumerable. Shall we therefore abandon the process of counting, and the study of facts regarded numerically?

Lies of
religion.

Other subjects have had their lies, yet we have not ceased from study. By the side of the pure worship of Jehovah there was the lying worship of Baal, and the idolatry of the golden calf. Men have bowed down to stocks and stones. While acknowledging a supreme God, they have sacrificed to Jove and Neptune, Mars and Venus. Even now there are uncounted Africans trembling before their fetish: hundreds of millions of Asiatics, the few reverencing the maxims of the wise Confucius, the many practising the rights of more popular systems, or professing a belief in Brahma, Vishnoo, and Shiva, or sacrificing themselves before the car of Juggernaut, or strangling victims in the name of a goddess, or propitiating heaven by a praying machine. We still have Sunnites and Shiites among the Moslem, and among Christians, we have Roman Catholics and "Orthodox," Lutherans and Presby-

terians, Calvinists and Arminians, Anglicans and Congregationalists, Southcotians and Mormons. Here must be multitudes of lies; yet we go on studying religion.

To preserve health, or ward off misfortune, men have had recourse to amulets and phylacteries: in sickness, to incantations and mummeries; to acupuncture, piercing their flesh with needles; to blade-powder, treating their wounds by rubbing with a certain powder the blade that had hurt them, assured (and justly) that so applied to the blade, the medicament was as efficacious as if applied to the flesh. In the time of Hogarth there was Mrs. Mapp the bone-setter,⁽³⁸⁾ whose ignorance was so concealed by her quackish tricks, that one year she drove about in her carriage, but who was so little able to hold her ground that in the next year she was buried by the parish. Within my own manhood we had St. John Long,⁽³⁹⁾ with his two grand principles: that all disease is a result of an acrid fluid like mercury; and that a certain liniment in his possession would disperse or neutralize this fluid, while it would not act at all on parts unaffected by the fluid. In practice he tortured his patients with extensive wounds, necessary, he said, to their cure. Great was his notoriety! Yet after all these quackish lies, we go on investigating the art of healing.

Lies of
medicine.

Now religion, medicine, philosophy, have been studied for thousands of years: statistics only recently. David indeed, took a census of his people, but his example was discouraging. So little exactness was attained by Greeks and Romans, that the

Recency of
statistics.

populousness of the ancients supplied a fertile theme to the sceptical Hume. Centuries ago there existed a something called Political Arithmetic, giving a glimpse of what might be done in after times. Sweden too, as I have mentioned before, alarmed by recurring famines and possible depopulation, got regular accounts of births, marriages, and deaths, and of other facts bearing on the subject of population.

Achenwall :
science or
art :
etymology.

But Achenwall has commonly ascribed to him the credit of founding the science or art of statistics. I say science or art,⁽⁴⁰⁾ because there is a difference of opinion as to which it ought to be called : for myself, regarding a science as a formal exposition of laws according to which phenomena follow each other, and by means of which laws the future may be foretold ; and not finding in statistics any such laws, I am inclined to withhold the name of science. About a hundred years ago Achenwall was a professor at Gottingen : he published a volume which he called *Scientia Statistica* ; and from this came the German statistik, the French statistique, and our statistics. The *scientia statistica* however, was much wider than our statistics : it was the thorough knowledge of the respective and comparative condition (status) of different countries. We naturally imagine it to have been intended to signify the knowledge of the statist or statesman ; whereas status or condition seems to be the immediate root of the word.

Extent of
statistics.

I say that Achenwall meant much more by his term than we mean by ours.⁽⁴¹⁾ His successors did the same : it was only gradually that they narrowed

it to its present signification. Schlæzer, the first of them, said "history is statistics in movement, history at rest is statistics." That is, as I understand it, all the present materials for future history are statistics. In 1841, William Playfair said that the science consisted in researches into the political affairs of states, and that geography was a part of the science. M. Quetelet, with all his eminence, does not appear to have added to the clearness of our definitions: M. Moreau de Jonnes, in 1847, came much nearer to our English notions, when he said, "La Statistique is the knowledge of social facts expressed in numbers."

I have said that I regard statistics as an art rather than a science. But taking the subject in its wider sense, it must be pronounced a science. Thus, M. Dufau, in 1840, called it "the science which teaches us how from analogous numerical terms, to infer the laws of succession of social facts." But as I now find it limited to the knowledge of facts numerically arranged, with a view to drawing inferences, but generally leaving to social science or sociology the actual drawing of the inferences, I call our present statistics no science. It was a science, it is an art.

Not now a science, because narrowed.

I have quoted with approbation this definition; the knowledge of social facts expressed in numbers: this limits statistics to facts affecting society. Among these facts must be reckoned the income and expenditure of a nation: but I should not properly speak of a statistical account of my private income and expenditure, things interesting only my own family. An account of the number of horses and

Limitation to social facts: secondary sense.

foot passengers on a high road may be accounted statistical, as bearing on an alleged necessity for providing a railway: an account of the number of friends who call annually at my house would be a mere futility to the world at large, and would in its naked form be denied admittance into any statistical publication: to get it admitted one must show that it had some bearing on matters affecting society. May I then venture to shorten our definition to "social facts expressed in numbers?" No doubt, we use the word, as we use most words in a secondary sense. A large factory, with a capital of a quarter of a million, may have a vast extent of details; and can hardly be rendered profitable without a careful arrangement of these: we should probably say justly enough, that the managing partners were careful or negligent of the statistics of the concern; meaning that they were diligent or careless in collecting the details and arranging them under heads. These manufacturing facts are not interesting to society, but the accounts are called statistical, inasmuch as by their extent and intricacy they resemble national accounts.

Facts only ?
or inferences
also ?

There is a great difference of opinion as to the due limits of the art on one side. I have heard it maintained that the statistician ought to do nothing but collect facts and arrange them under heads: that he ought to abstain from inferences: that he should be the servant of the thinker on social theories: that even though he should unite in himself the two characters of collector of facts and thinker, he should keep the characters distinct, and in a statistical paper should not enter on

his theories. For myself, in calling the subject an art and not a science, I have apparently admitted this limitation. But it must be remembered that in this and kindred topics, it is impossible to entirely separate science and art: we must be contented to give a designation accordingly as science or art predominates. In Political Economy there is a science and there is an art. Ricardo's treatise is almost altogether scientific; yet on the subject of taxation it goes near to laying down rules for statesmen, and in that respect trenches on art: J. B. Say calls his great work *Practical Political Economy*, yet he largely mixes up science with art.

I lately read before the London Statistical Society, a paper on "the progress of elementary education." To estimate this progress I inquired how many persons, at one period and another, signed the marriage registers, and how many only made their mark.⁽⁴²⁾ I began with 1753, the year of that Act of Lord Hardwick's which put an end to extempore marriages, performed by any wretched Fleet clergyman. I got my friends in different places to search the parish registers of marriages; and to inform me how many signatures and how many marks they found in the periods 1754-62, 1799-1804, 1831-37. I extracted from the Registrar General's Reports the same information for the whole country and for each part of it, for the years 1840, 1851, and 1863. I placed these returns in juxtaposition, so that a comparison between them might easily be made.

So far I was strictly within the narrowest limits of statistics. But I did not keep within them. For example; beginning my paper with a short history

Example:
Paper on
Educational
Progress.

Not confined
to figures.

of what others had done, and having quoted a statement, that some years before, the east or poorer part of London had far more school accommodation than the west or richer part, I went on to offer as a partial explanation, the fact of the existence at the west end of large numbers of unmarried servants, who swelled the Census, but required no schools. The explanation, true or false, would be pronounced by some persons outside the due limits of a statistical paper. But I sinned still further: I showed shortly what had been done for education; I remarked on the imperfections of Sunday Schools; I gave my opinion as to the Privy Council system; I estimated favourably the effect of the Revised Code so far as it treated with results rather than means; I censured the parsimony of our government assistance as compared with that of the United States; I explained the half-time system under the factory acts; I inquired as to our prospects for the future; I briefly condemned any immediate attempt to secure attendance by direct compulsion; I suggested as a substitute an extension of the present industrial-school acts. I went far beyond the province of a collector of social facts numerically stated.

Yet it was a statistical paper.

Was this communication then, a statistical paper? I say it was. The foundation of the whole was a series of tables extending over eleven pages. Thirty pages of the letter-press were devoted to a history of previous statistical inquiries, and to an explanation of my eleven pages of tables. It was only as a supplement to all this, that I committed the sins enumerated in my last paragraph. Statistics

greatly predominated over everything else. We name a thing from its leading characteristic. I was for ten years a member of a club, which we called the Shakspeare, because we met principally to read Shakspeare's plays: we did not think it inconsistent with our main purpose or our name, to occasionally wander into Sheridan's comedies, or to read *Douglas* or *Venice Preserved*. Statistics are collected for men, and men will scarcely continue to assemble or to read if they are to be supplied with absolutely nothing but dry columns of figures destitute of living interest. Besides; if a man sets no purpose before himself, he will collect his figures at random and arrange them chaotically: as we may see in many of the papers furnished by public offices in answer to parliamentary requisitions; the particulars being ill-expressed by the member who moves for a return, and the purpose being ignored by the hurried officer who supplies it.

Some persons, for shortness and neatness, say statist instead of statistician. Others object that the order of the conjugates is statist, statistics, statistician. I have already said however, that Achenwall, the founder, according to the *Dictionnaire de l'Économie Politique*, derives statistik from status, condition: that is, the status of nations. But another objection is that the English word statist has long been otherwise appropriated as synonymous with statesman.

Statistician
or Statist?

"Their orators thou then extoll'st, as those
The top of eloquence, *statists* indeed,
And lovers of their country."

Paradise Regained (Johnson).

An old word indeed, may be newly applied. The objection I raise to this new application, is that it is unfavourable to perspicuity. Every one knows what is meant by statistics, and therefore by statistician: most accurate readers would have to inquire the intended meaning of statist.

Moral
statistics:
Buckle.

The late Mr. Buckle was a great eulogist of statistics as applied to the study of man.⁽⁴³⁾

"To those who have a steady conception of the regularity of events, and have firmly seized the great truth that the actions of men, being guided by their antecedents, are in reality never inconsistent, but, however capricious they may appear, only form part of one vast scheme of universal order, of which we in the present state of knowledge can barely see the outline,—to those who understand this, which is at once the key and the basis of history, the facts just adduced, so far from being strange, will be precisely what would have been expected, and ought long since to have been known."

Alleged
uniformity
of crime.

The facts referred to in this passage are those connected with crimes generally, murders, suicides: Mr. Buckle's aim is to show the uniformity of the numbers from year to year; but he overstates the case when he says:

"The fact is, that murder is committed with as much regularity, and bears as uniform a relation to certain known circumstances, as do the *movements of the tides* and the *rotations of the seasons*."⁽⁴⁴⁾

Now this certainly is not true either of murder or of crime generally; for every one who has busied himself with the subject, knows that one of the great problems still unsolved is the question, why it is that crime fluctuates so much; having its series of years during which it steadily grows; and then perhaps a series during which it steadily diminishes.

Mr. Buckle, after confirming his opinion by *Exaggeration.* that of M. Quetelet, goes on thus.

“For later inquiries have ascertained the extraordinary fact, that the uniform reproduction of crime is more clearly marked, and more capable of being predicted, than are the physical laws connected with the disease and destruction of our bodies.”⁽⁴⁴⁾

This may be true, and yet the quantity of crime may be very variable: since the laws of disease are at present most imperfectly known, and our power of predicting disease is very limited. If I am asked to say what will next year be the sanitary condition of Birmingham, I must answer that I cannot say; because I have found that with all known causes remaining unchanged, there have been hitherto inexplicable variations in the death-rate. I conclude that to compare the current of crime or that of deaths, with the recurring movements of the tides or the rotations of the seasons, is to greatly overstate the regularity of crime and death. Perhaps also, we may accuse the following passage of some exaggeration.

“It will be observed, that the preceding proofs of our actions being regulated by law, have been derived from statistics; a branch of knowledge which, though still in its infancy, has already thrown more light on the study of human nature than all the sciences put together.”⁽⁴⁵⁾

It is thought, said the Prince Consort, that statistics of this kind have an evil tendency.

Objection
to moral
statistics.

“We hear it said that the prosecution of statistical science leads necessarily to Pantheism, and the destruction of true religion, as it deprives in man’s estimation, the Almighty of His power of free self-determination, making His world a mere machine, working according to a general pre-arranged scheme, the parts of which

are capable of mathematical measurement, and the scheme itself of numerical expression; that it leads to fatalism, and therefore deprives man of his dignity, of his virtue, and morality, as it would prove him to be a mere wheel in this machine, incapable of exercising a free choice of action, but predestined to fulfil a given task and to run a prescribed course, whether for good or for evil.”⁽⁴⁶⁾

Thus said the Prince Consort, at the Congress of July 1860, held at Somerset House. The alleged danger of Pantheism must be of German origin: the danger of fatalism would be great, if offences occurred, as Mr. Buckle asserted, with as much regularity as flowing and ebbing tides and recurring seasons. But when we find five times as much drunkenness in one town as in another; five or ten times as much murder in one country as in another; indefinitely greater soberness, humanity, self-restraint in one age than in another; polygamy and slavery flourishing at one time under the authority of the greatest philosophers, and banished in another; a fear of fatalism and a denial of the possibility of human progress, are absurd.

Popular
objection.

The practical objection to statistics is of a different kind. I have remarked upon the supposed imperfection of the Irish registration at present, and I have attributed it to an unwillingness on the part of the people to coöperate with the appointed officers. In one instance lately in Wales, there was an openly expressed dislike to making a return required: when the government had determined in 1866, to get regular agricultural statistics, the farmers of Brecknockshire⁽⁴⁷⁾ met and resolved not to declare the numbers of their live stock, because they feared that the proceedings were really intended

to introduce a new tax. Under arbitrary or irregular government such alarm would be natural and well founded: so long as the *taille* was levied in France, accurate returns would certainly not have been got from the *métayers* or peasants.

I have said that I do not go along with Mr. Buckle in the extraordinary value he assigns to statistics: yet all I accuse him of is some exaggeration; and I am quite convinced that counting is essential to accurate knowledge and comparison. Guerry quotes from Sir John Herschel, "Numerical precision is the very soul of science; and its attainment affords the only criterion, or at least the best, of the truth of theories." If indeed, this estimate is untrue, there has been a singular waste of effort during the last thirty or forty years. The London Statistical Society was founded in 1834, by very distinguished men, including Hallam, Babbage, R. Jones: not without difficulty; for to avoid probable dissensions through differences of sentiment, it was agreed that facts alone should be dealt with, and opinions should be carefully excluded; a limitation not strictly insisted on in later years. Two years afterwards came the Registrar General's copious returns: these have since been followed by Criminal Statistics, and returns of the poor law administration, of education under the Privy Council, and of the Post Office, together with that useful manual which appears every year, the *Statistical Abstract*. Years ago, Mr. G. R. Porter in his *Progress of the Nation*, declared that no other people had such an abundance of trustworthy numerical knowledge. Yet one cannot but envy Sweden its Vital Statistics

Value tried
by the
Statistical
Society, &c.,

going back nearly a century further than ours; and men are even found to complain as did Dr. Forbes Winslow in 1840 that Great Britain had neglected the whole subject.

and by the
Inter-
national
Congress.

During some years, Europe at large has shown its appreciation of statistics, by several times holding an International Congress; and in the year 1860, when it took place in London, the Prince Consort presided over it, as I have already mentioned. These proceedings form a sufficient protest against the depreciating opinions put forth by disputants when figures contradict their conclusions. The international meetings have not yet succeeded in harmonizing the various returns of one country and another, as to crime or even as to the facts of birth, life, and death: but they tend towards this consummation. They have also helped forward the proposals to establish moneys and measures common to all Europe and to the United States. Long may peace allow the continuance of these labours!

VII.

Actually
accom-
plished and
wanted.

INACCURATE then, as are many of the figures, incomplete as are many others, hasty, rash, and absurd as are some of the inferences, I see no reason to despair of the future of statistics. I find that great progress has been made in social knowledge during the century: I see that neither actuary nor poet can any longer believe in advancing depopulation; that though great towns are proved to be sepulchres of men, yet we can no longer pretend that they require immigration to maintain their numbers; that the

crimes committed, the detections, the punishments, the number of offenders of each sex, the fluctuations of amount, are all before the public; that the government revenue and expenditure, the exports and imports, the movements of gold and silver, the prices and yield and importations of corn, the liabilities and assets of the national bank, the mileage and finances of the railways, are officially announced with a near approach to accuracy. The severest satirists of statistics, will not propose that these publications should be abandoned. Instead of despairingly going back to the ignorance of our forefathers, we should strive to complete our knowledge, to improve our forms of return and get some international uniformity in them, to push our researches into every quarter.

It is even of higher importance that we should make our tables accurate, or ascertain the degree of their deviation from truth. This latter is in some cases the better course, because if a new return is more accurate than a previous one, it ceases to be available for direct comparison, and the public will be deceived. The last Census I believe, underrated the English population by more than half a million: if by a more accurate enumeration, this half million were added at the next census, the apparent increase from 1861 to 1870, would be very deceptive. We should have our rates of increase during each ten years stated in this fashion: 16 per cent., 15, 14, 13, 12, **14**. Even though the real increase 1861-70 were $11\frac{1}{2}$ per cent., it would be set down as 14. The accuracy here should consist in ascertaining the deviation

Accuracy :
what ?

from the truth. To the public, the *rate* of increase is the question of interest, and it is unimportant to know whether our absolute numbers are $22\frac{1}{2}$ or 23 millions. The rate of increase indicates the degree of prosperity, and the grounds for anticipating further multiplication of numbers: the absolute numbers, whether half a million more or fewer, are of little national importance.

Great care
required.

But how is accuracy to be attained? As in any other complex and difficult matter, by exercising the greatest caution; by inquiring what has been done by previous students; by turning over the old numbers of the *Statistical Journal*, and digesting the more important contributions. Of course I flatter myself that if any one will ponder the First Part of this essay, he will see how and where men have gone astray, and will the more easily keep in the straight path: that First Part is intended to be statistics taught by examples of errors: it is to the statistical art what a chapter of fallacies is to logic.

It is only by experience that a man learns the difficulty of being accurate in figures of any kind. Men of business learn this effectually. I never allow the best clerk's statements or calculations to pass unchecked; and though from early and continued training, I am both quicker and more accurate in mechanical arithmetic than the clerks I have had, I do not pass anything of my own without an independent examination. In 1864, when I had read before the London Statistical Society a paper attacking the Registrar General's Reports, I found that the Registrar had just had

completed a series of calculations including the very ones I had laboriously made. Here was a probable triumph for the officials; since it seldom happens that an amateur escapes errors of calculation. I trembled when I got the printed paper; but as it turned out, my figures agreed so nearly with those of Somerset House, that my case was in no wise impugned.

I approached thus nearly to accuracy by employing a clever young clerk to make the same calculations which I had made. Nor was I content with giving him my figures to be examined; such a check is slovenly and insufficient: he made separate calculations, and we compared results. Even this is not enough, because there might be errors of data. Many of my results were arrived at by getting figures for each of ten years, and from ten different volumes: I put these volumes into my clerk's hands and pointed out to him where he would find the required figures: he took them out, added them together, divided them, and gave me the result. If this agreed with mine it was a thousand to one that we were both right. I say therefore, that an amateur may confidently present his figures if he has had both the data and the calculations independently dealt with by a friend or assistant.

Check all calculations.

Perspicuity in the mode of stating results, is a matter of considerable importance. There is one mode frequently adopted, that is not at once intelligible. If I say that half the English children die under ten years old, that is clear: if I say that in a semi-civilized country three-fourths of the children die under ten years old, that also is clear.

How state the rates?

But if I compare countries A, B, C, D; and if I say that in A the deaths under ten years old are 7 in 16, those in B, 8 in 19, those in C, 11 in 29, the reader of the statement is lost. Even if, comparing E, F, G, H; I say that a certain thing happens in E once in 171 times, in F once in 190 times, in G once in 203 times, and in H once in 219 times, the reader probably has to stop and recollect whether once in 219 times is better or worse than once in 171 times. If I contrasted three contiguous districts in England; and said that in the rural district the deaths were 1 in 50 of the population, in the mixed district 1 in 47, and in the town district 1 in 39; that statement would be quite precise ($\frac{1}{50}$, $\frac{1}{47}$, $\frac{1}{39}$) but an inexperienced reader would require an effort to recollect that $\frac{1}{39}$ is worse than $\frac{1}{50}$: it is equally precise and far more clear to say that in every thousand of population the deaths of the three districts were respectively 20, 21, 26: the unfavourable condition rises as the figures rise: no laborious reminiscence is needful.

Other
examples.

I have seen an official account of the proportion which offences detected bore to offences committed. Birmingham, it was said, though the amount of crime committed was not relatively great, did not stand very high as to success in detecting offenders.

OF OFFENCES COMMITTED,

1857-8.	The	detections	were	in	Birmingham	. . . . .	1 in 7
1857	"	"	"	"	Manchester	. . . . .	1 in 7
1858	"	"	"	"	"	"reached"	1 in 9
1857	"	"	"	"	Liverpool	. . . . .	1 in 5
1858	"	"	"	"	"	"diminished" to	1 in 4

The writer had got puzzled when he said that Manchester having had in 1857, $\frac{1}{7}$ th, *reached* in 1858 the smaller proportion of $\frac{1}{9}$ th: that Liverpool having had in 1857, $\frac{1}{5}$ th, *diminished* in 1858 to the higher proportion of $\frac{1}{4}$ th.

Stated by percentages, the tables could not be misinterpreted.

OF OFFENCES COMMITTED,

1857-8.	The detections in Birmingham were	. .	14 in 100
1857	" "	Manchester	. . . . 14 " "
1858	" "	"	<i>fell to</i> 11 " "
1857	" "	Liverpool were	. . . . 20 " "
1858	" "	"	<i>rose to</i> 25 " "

I repeat that the question here is not the amount of crime but the proportion of detections to offences.

I find a similar mistake in an able paper on Criminal Statistics, thirty years ago.

"On a comparison of the returns from the several counties, a great disproportion is exhibited in the acquittals. The general average, as before stated, is 1 in 3.6. This average has been *exceeded* in sixteen counties."(48)

Examples of this *excess* are then given: $\frac{1}{4.8}$, $\frac{1}{4.5}$, $\frac{1}{4.1}$, $\frac{1}{4.}$, $\frac{1}{3.9}$.

Stated by percentages, this table also would have been understood.

General average	. . . . .	28 in 100
In some counties	. . . . .	21, 22, 24, 25 in 100
It is seen at once that 21, 22, 24, 25, are all less than 28.		

I may point out another error which is obvious enough, but which amateurs fall into. A writer says that in a particular year a price fell 50 per cent., and that in the next year it recovered itself, having risen again 50 per cent.

Fall and rise
of 50 per
cent.

Say that wheat had been as high as	. .	100s. the quarter.
In year A it fell 50 per cent., <i>i.e.</i> to	. .	50s. „ „
In year B it rose 50 per cent., <i>i.e.</i> to	. .	75s. „ „

If the writer had said that the price fell by one half, and then rose again by one half, he would have been less likely to blunder.

Inferences.

Having obtained correct figures and exact calculations, the most difficult task remains; that of drawing just inferences. In this operation no special rules are applicable. An acute mind accustomed to weigh probabilities in the affairs of men, will be able to judge correctly of these lessons of statistics: the acutest mind, ignorant of affairs, cannot be here trusted. M. Chasles, a distinguished mathematician, believed in the Newton-Pascal forgeries, and showed his sincerity by spending thousands of pounds in buying the trash of an impostor: I would not trust M. Chasles, nor perhaps any mere mathematician, to interpret a series of statistics. What is wanted is

“Good sense which only is the gift of heaven,
And though no science, fairly worth the seven.”

At the same time, I am far from meaning that men engaged in affairs generally possess the necessary degree of good sense: the quality Pope intends by his words is a rare gift of heaven. Few things are more amazing than the inferences drawn by educated men in cases outside their ordinary experience. In the unhappy Byron controversy, there cropped up enough bad logic, to furnish a chapter of fallacies. Statistics are commonly interpreted in the same loose fashion; and this it

is principally which has brought them into such bad credit. Just as every man believes himself able by the light of nature to drive a gig, so he thinks himself competent to declare the meaning of a column of figures. Let those who wish to avoid such conceit, first study other men's labours, and other men's blunders.

Above all things we are bound to avoid Conjectural Statistics. I have often cited the case of Liverpool. Before our registers enabled us to say that of all our great towns this was the unhealthiest, the reverse opinion prevailed; and the question discussed was, not *whether* Liverpool was a healthy town, but *why* it was a healthy town.

Conjectural
Statistics:
Liverpool.

This serious mistake as to Liverpool, is attributed to the late Mr. Rickmann, Clerk to the House of Commons. His authority, together with that of Mr. G. R. Porter, is also given by M. Quetelet⁽⁴⁹⁾ for an erroneous death-rate: for I presume that these gentlemen are meant, in the work, *Sur l'Homme*, i. 136; though the names given are merely "Porter et Rickmann." We know the English death-rate from 1841-50, and 1851-60, to have been $22\frac{1}{4}$ in the 1,000, and to have been about the same in the second decade as in the first: we may therefore say that from 1821 to 1831, it was at least 22. But M. Quetelet, on the authority I have mentioned, states it as 19·59, say $19\frac{1}{2}$. I wish this were true, since we might then entertain hope of regaining this favourable condition. Unfortunately, we have no authority for the figures, beyond Conjectural Statistics.

English
death-rate
1821-31.

In treating of taxation, an interesting question

Taxation of
Classes.

arises. In the last generation, there were severe and just complaints as to the incidence of the taxes. We are told that at the present time in Paris, the octroi on wine worth 1d. a bottle is 4d. a bottle, and that on wine worth 1s. or 5s. a bottle the octroi is still 4d. (I am not speaking of a bottle of a particular size.) The octroi is in relation to value, 12 or 60 times as great in the case of common wine as in the case of the best. To the officers a bottle of wine, whatever its quality, is a bottle of wine. The same apparent unfairness exists among ourselves in a less degree, when we tax a pound of bohea at the same rate as a pound of souchong. But the unfairness may be only apparent. The drinkers of Château Lafite in Paris, and the consumers of souchong in England, may perhaps pay in other ways such additional taxes as to compensate for the inequality in wine and tea. In England there is the income tax of 6d. to 1s. 4d. in the £, and which rose to 2s. during the great war: the consumers of bohea contribute but little to that unpleasant impost.

To determine then, the fairness or unfairness of our whole taxation, we should have to make out both what is actually paid by different classes, and what ought to be paid. Seven years ago, I made an attempt in this direction, but seeing how conjectural it was I did not publish it. Much must depend on the entire amount of the incomes earned, and we have no complete information on that matter. As to the incomes of the middle and upper classes we are tolerably well informed through the income-tax returns, but we can only guess the aggregate

amount of wages. One eminent statistician estimated this at 250 millions, another at 300, a third at 350: Mr. Leone Levi⁽⁵⁰⁾ crowned the edifice by setting it down as 418 millions. Any argument founded on such conjectures is worthless.

It seems to me that the Registrar-General has lately exposed himself to censure. I have already remarked upon the Irish returns, as being open to suspicion in making births, marriages, and deaths, all of them fewer by far than those of England and Scotland, in proportion to population. The English Registrar-General,⁽⁵¹⁾ in his 28th Report, after giving a summary of the English figures in 1865, desired to give a further summary of the figures for the three kingdoms: he disbelieved the Irish returns, and ought therefore, I conceive, to have abandoned the notion of a general summary: but he chose to run into Conjectural Statistics, by adding one third to the Irish figures; and in the 29th Report⁽⁵²⁾ he varied his conjecture by adding a fourth instead of a third to the deaths, still adding a third to the births and marriages. Such conjectures should not carry the seal of authority.

Registrar
General
death-rate.

On the whole, enormous as have been the Lies of Statistics, false as have been many of the returns, inaccurate as have been some of the calculations, monstrous as have been a host of inferences, we have nevertheless profited greatly by what has been accomplished. The errors have gradually evaporated, and a considerable remainder of truth has been left. We know far more than did our fathers, of the progress of population, of the resources of the nation, of the earnings of the

Conclusion.

industrious, of the mortality in town and country, of vagrancy and pauperism, of crowding and emigration. Legislators and philanthropists could ill spare their statistical guides, lame and purblind though they have been.

NOTES.

- (1) Registrar-General, 28, ix.
- (2) Social Science Transactions, 1862, 608.
- (3) Reg.-Gen., 29, xxiii.
- (4) Statistical Journal, 24, 229.
- (5) Pall Mall Gazette, 9 April, 1869.
- (6) Stat. Journal, 18, 178.
- (7) Social Science Trans., 1862, liii.
- (8) Ib.
- (9) Education Commission, II, 179.
- (9A) Compare Journal of Actuaries, Oct., 1869, 193.
- (10) Statistical Abstract, 12, 85.
- (11) Life of Sir S. Bentham, 160.
- (12) The Danger of Deterioration of Race. Longmans, 1866.
- (13) Pall Mall Gaz., April 17, 1866.
- (14) Social Science Trans., 1866, 433.
- (15) Stat. Journal, 1865, 73.
- (16) Scott, Statist. Vindication.
- (17) Ib., p. 33.
- (18) Stat. Journal, March, 1866.
- (19) Annals of British Legislation, 73, 249. Stat. Journal, 30, 158.
Pall Mall Gaz., 25 July, 1867; 21 Nov., 1868; 28 April, 1869.
- (20) Journal des Économistes, June, 1867, 374. Revue des deux
Mondes, 76, 739.
- (21) Pall Mall Gaz., 14 April, 1866.
- (22) Stat. Journal, 32, 217.
- (23) Ib., 30, 375, &c.
- (24) Pall Mall Gaz., 18 Nov., 1867; 31 Aug., 1869. Daily News,
18 Aug., 1869.
- (25) Economy of Labouring Classes, 484.
- (26) The Friend of the People, 14 April, 1860.
- (27) Annals Brit. Legisl., VII, 43.
- (28) Social Science Journal, I, 1, 13.
- (29) Judicial Statistics, 1865, vii and viii.
- (30) Stat. Journal, 31, 350.
- (31) Lord Colchester's Diary, I, 84.
- (32) Stat. Journal, 25, 138.
- (33) Le Play, Ouvriers Européens.
- (34) Stat. Journal, 30, 228.

- (35) Social Science Trans., 1859, 575.
- (36) Stat. Journal, June, 1864, 179.
- (37) Pall Mall. Gaz., 26 Oct., 1867, 3.
- (38) Anecdotes of Hogarth, 2nd edit., 200 and 206.
- (39) Westminster Review, 14, 467.
- (40) Compare Dict. de l'Économie Politique, II, 653, 2.
- (41) Ib.
- (42) Stat. Journal, March, 1867.
- (43) Buckle, I, 30.
- (44) Ib., I, 23.
- (45) Ib., I, 31.
- (46) Stat. Journal, 23, 280.
- (47) Pall Mall Gaz., 14 March, 1866, p. 9.
- (48) Stat. Journal, I, 234.
- (49) Quetelet, Sur l'homme, 1835, I, 136.
- (50) L. Levi, Wages and Earnings, 7.
- (51) Reg.-Gen., 28, xxiii.
- (52) Ib., 29, xxiii.

Essay III.

MIDDLE-CLASS EDUCATION.

I.

WE have lately heard so much about education, that the subject appears hackneyed, if not exhausted: yet no final answer has yet been given to the questions, how a man of the middle class may best educate his sons; whether at a day-school or a boarding-school, at a private or a public school; whether by teaching him Latin and Greek or by discarding those antique languages; by what means sound English instruction may be secured, and may be combined with the acquisition of French and German and natural science.

After all, the topic of education is no more exhausted than the unfailing topics of religion and medicine: civilized men have always anxiously discussed, and go on discussing, the means of healing the diseases of soul and body. But it is proverbially better to prevent than to cure: and

education in its widest sense is the prevention of disease, since it is the training of soul and body so as to secure the robust health of both. How to correct the disorders of the soul, how to heal the sickness of the body, how to ward off such disorders and sickness from our children by giving vigour to the mental and bodily functions: these are questions which never become stale.

In offering advice on this weighty and perplexed subject, I only claim to speak with such authority as experience gives. I am myself of the middle class: I was brought up in that rank: I have had sons to educate: I have long taken an active part in the financial and general management of schools. I have clearly seen the scholastic shield on that side which is imperfectly visible to masters and to commissioners of inquiry.

But our opinions are generally formed or deeply tinted by our course of life. In most cases men take their own experience as their standard measure: in some cases, lamenting the defects of their own career, they rush to the conclusion that their sons by a reversed process may attain perfection. To which of these classes do I belong? How far are my opinions results of circumstance rather than reflection?

“In studying an author, our first care should be, and our first curiosity always is, to know his life, his doctrine, his manners.”⁽¹⁾

In the early part of this century, the middle classes were very imperfectly instructed. It was my good fortune however, to be the son of one who was an exception: for being an only child,

he had been sent to the Sutton Coldfield Grammar School, as a private boarder of the head master Mr. Webb, the father of the late Master of Clare Hall. Mr. Webb became attached to his pupil; and only a few years ago, when I visited his surviving daughter at Sutton, she mentioned with tears in her eyes, that my grandfather had been one of her best friends, and that my children were the fourth generation of her acquaintance. My father was so well taught, that he retained his Latinity through life: he carefully learned French: he was a reader of the *Wealth of Nations* when it was comparatively recent; and he imbibed that sort of speculative philosophy which we now euphemistically attribute to the Broad Church, and which in the minds of most of his fellow churchmen of the last century was stifled by the French Revolution.

It was my irreparable misfortune to lose my father when I was only eleven: careful and judicious as was the bringing up of the family afterwards, a mother could not fill the place of a thoughtful and instructed man, and especially in the case of an eldest son: I may fairly attribute many follies and heartaches to the loss of that salutary influence. Perhaps however, I am the more capable of pointing out the perils of the road, because I have had to grope my way for myself.

Fifty years ago, teaching began much earlier in life than at present: we were expected to read the Bible at an age at which our children are ignorant of their letters. When I was seven years old a school had to be found for me, and this

was not easily done. The grammar school on the foundation of Edward VI gave such instruction as was given by other grammar schools: much Latin, some Greek, and little else: the head master (Mr. Cooke) was a man of ability; so was the rather eccentric second master (Mr. Kennedy, "the father of all the Kennedys"); but as I have heard, the "usher" (Mr. Clay) though severe, was the soul of the school, at any rate for the boys who were not boarders.

Then however, as now, some parents were not content with this partial instruction: in Birmingham especially, the scientific and thoughtful men who headed the Lunar Society, had led fathers to believe that boys might fairly be expected to learn their own language, and to pick up some crumbs of mathematics and science. It happened that my father had taken into his counting-house a young Walton, and had found him intelligent and well taught. Learning that the boy had been brought up at Hill Top School, he made further inquiries and finally sent me there as a day scholar.

Hill Top School was kept by a family since become famous, whose name jingles with the name of the place. The house stood at the top of the steep Gough Street, and ran back to Singer's Hill, which last name as well as that of Hill Top, have I believe, since disappeared. Thomas Wright Hill was the father of many sons, of whom the most popularly known is Sir Rowland Hill, the inventor of penny postage. "Old Daddy," as he was afterwards more familiarly called, was one of the kindest and most upright men I ever knew: irascible as became

his profession: tender-hearted: intelligent and reflective: imbued with the liberalism which is now predominant: of moderate scholastic attainments, having indeed been originally engaged in some small business; but resolute in making his boys understand whatever he taught them. As to the sons, men must be estimated by what they do, and not by what they are; the highest mental powers can be known only so far as they are exhibited in action or in literature: otherwise, Sir Rowland's elder brother, Mr. M. D. Hill, lately the Recorder of Birmingham, would have been the greatest of his family. Indeed he would have been the greatest of most families, since he all but attained, and thoroughly deserved, the highest honours of the Bar. All the brothers were men of distinguished ability: but Sir Rowland distanced the others by his happy discovery, that the cost of carrying a letter from town to town was so small that it might be disregarded, and that therefore a uniform rate was possible and very nearly just: a discovery not stumbled upon, but made out by an analysis of accounts. Whatever fifty years ago might be the merits of Hill Top, it was a gain to a boy to be in daily intercourse with men of such ability.

I was only seven years old when in 1817 I first went to this school; which a very few years afterwards was removed to Edgbaston (a suburb within the present borough), and took the name of Hazelwood. There it remained long after my boyish education was finished.

Hazelwood was so different from other schools, that there would inevitably be great varieties of

opinion as to its merits. The men educated there have not generally done it justice; and I confess that I formerly shared in their depreciation of it: yet when I once spoke slightly of it to a near relative who had known me from childhood, he objected that so competent a judge as my father, was well pleased to get such an education for me. I fancy that the Hills taught us to be unjust to themselves: that they stimulated us to aspire to a higher degree of excellence than they enabled us to reach: that they excited a thirst they could not quench; and thus sent us away with a painful consciousness of deficiencies.

In many respects the curriculum anticipated our present demands. We were thoroughly taught the elements of English; and our spelling was immaculate. In pronunciation, the broad midland i was severely repressed. The dropping of an h was one of the seven deadly sins; and the punishment for it would have moved the holy ire of St. Augustine: who complained that among his teachers, more stress was laid on pronouncing this unimportant letter, than on the observance of God's eternal laws; so that if a man said *ominem* instead of *hominem*, he would have incurred more censure than if he had hated the *hominem*, his fellow man.

“Ut^(1A) qui illa sonorum vetera placita teneat aut doceat, si contra disciplinam grammaticam, sine aspiratione primæ syllabæ, *ominem*, dixerit, displiceat magis hominibus, quam si contra tua præcepta *hominem* oderit, cum sit homo.”

Our arithmetic was amazing, even excelling by our laborious acquisition of mental arithmetic, the

success of the present Privy Council schools. We had a good resident French master. Our Latin however, was defective; for though it was tolerably extensive, it was slovenly: we learnt the Eton syntax, and we were taught to scan verses and to pronounce by quantity, but we were unable to write decent prose. Much Greek could not be expected among boys who left at 15 or 16. It would have been useless for us to stay longer, since our masters could not have carried us much further: they had enjoyed no academical advantages, and it was whispered that the most distinguished of them could not construe Corderius or conjugate amo. In mathematics we did some algebra, a little Euclid, and less trigonometry: all was done intelligently and thoroughly. A good deal of time was wasted on shorthand: I have never met with a school-fellow who afterwards used it; and the only advantage I derived from it was a clear division of letters into labials, dentals, palatals, and gutturals. If the hours thus devoted to a philosophical stenography had been given to writing Latin prose, we should have been really well instructed: even as it was, we acquired elements of more value, and a greater power of thinking, than we should have got at the then effete grammar-school.

The discipline was framed after the newest experiments of the newest philosophy. About 1818 or 1819, caning, the only corporal punishment previously inflicted, was abolished: I have an unpleasant recollection however, of one of the masters knuckling my head long after that. Some years before 1818, Professor Pillans, as head of the

Edinburgh High School, had given up corporal punishment in his own class: Abbot also⁽²⁾ relates that Dr. Bell in 1812, told the boys in the Central School of the National Society, that "there were no rods in that school; he did not lay out his money in that way." Dr. Bell's substitutes were confinement in school, the black hole, and expulsion. Besides these we had a scheme which was certainly ingenious, and in some degree efficient. It consisted in a school currency: there were actual coins of which a mark was the unit: these marks were earned by voluntary work, such as writing a good copy, or reading a useful book: peccadilloes were visited with a fine of 20 or 100 marks: an insolvent had to work out his debts. These marks were sold, and in that case the buyer was really mulcted in money: they were borrowed, and sometimes stolen; I remember once a quantity of base coin crept in through the son of a manufacturer whose diesinker had imitated the genuine mark. There were other school plans equally ingenious; many of them futile.

Grave moral offences were punished by a court of justice and a jury; an elder boy being the judge. Here again Dr. Bell had set the example. Lord Colchester says⁽³⁾ that a boy's hat having been destroyed by another,

"A jury of best boys out of each class was immediately empanelled, a witness was called, who proved that he saw the thing done; the culprit denied it, but the jury one after another all said they believed the charge to be true. The culprit could not bring any witness to disprove the fact, nor any one good boy to give him a character. The jury were then required seriatim to say what his punishment should be,—one said, 'to be expelled,' another, 'to be well beaten.' . . . The vote was then given for the black hole; others said it should be for one hour, for two hours, a night, two

days, a week, &c. The majority being for one night in the black hole, he was sentenced accordingly; but his behaviour then grew so outrageous that he was by common consent expelled and turned out of the school."

By juries and committees, by marks, and by appeals to a sense of honour, discipline was maintained. But this was done, I think, at too great a sacrifice: the thoughtlessness, the spring, the elation of childhood were taken from us; we were premature men: one of my younger schoolfellows told me, that as an elder boy, being appointed after I left, a guardian over his juniors, the responsibility weighed on him so heavily that he meditated suicide; and yet there was not a tinge of morbidness in his temperament.

The school was in truth a moral hotbed, which forced us into a precocious imitation of maturity. I have heard an Oxford friend say that Arnold's men had a little of the prig about them: I know too well that some of us had a great deal of the prig about us: I have often wished that I had the "giftie to see ourselves as others see us;" but I have comforted myself with observing that in later life my schoolfellows (perhaps therefore I myself) outgrew this unamiable character.

The Hazelwood constitution, discipline, instruction, were in a perpetual flux: the right to-day was wrong to-morrow: we learnt to criticise and doubt everything established: whatever is, is wrong, might have been our motto. We had a conceit that we could amend everything, from education to driving a horse. This constituted our priggism.

I left school at fifteen, though my two brothers

afterwards remained till they were older. I then spent a year in a merchant's counting-house, and five years in the manufacturing business which my father had left and which was carried on under the management of a partner. During the latter of these years I had formed an acquaintance with Martin Wilson Foye, a scholar of Trinity College, Dublin, who had come over to Hazelwood as a classical master. The cause of his leaving Dublin, as I was told, was this. He had taken an active part in a raging controversy between Roman Catholics and Protestants; and being one day at a meeting presided over by Lardner, a Fellow of the College, he took offence at Lardner's proceedings, jumped on to the platform, and knocked Lardner off his chair into the space below.

Foye had become a practised speaker: wanting to exercise his powers, he induced some of us to form a debating society; and though this never became large, it continued several years. This debating was perhaps, a bad regimen for the priggism I have confessed. Yet I cannot bring myself to regret it; for as it is impossible to go through life without speaking occasionally in meetings or committees, it is important to get early in life, presence of mind and a power of saying plain things in a plain way. In our case too, there was a scholar and speaker for leader; and we read some grave books and thought a good deal, to prepare for our debates. Wherever we met, the debating society was an unfailing topic of conversation.

When I reached twenty-one, a disagreement with the managing partner made me offer to leave, on

condition that I should go to Cambridge and prepare for the bar. It was necessary for me to recover what scholarship I had lost, and to add a good deal to it. I became a pupil of Foye, and after nearly two years' preparation, went to Trinity College, Cambridge. There were three *sides* (or tutors' divisions), and I went under Whewell, who was afterwards the "omniscient" Master of the College. At entrance, he examined me himself, by telling me to construe a passage in the Georgics: I made a gross blunder, floundered, and recovered myself: to my amazement he presumed that I intended to read classics: I did not then know how few youths at entrance could do as much as I had done; I only thought that my examiner's standard was a singularly low one.

I knew very little mathematics; but I read hard; and without any careful preparation of the classical subjects, secured a first class at the end of the first year. Before the end of the second year, the death of the managing partner, my opponent, brought me back to take his place.

The two years I spent at Cambridge formed one of the pleasantest periods of my life. Being three or four years older than most of my associates, I had no difficulty in avoiding excesses of every kind; from which I was further protected by the necessity of humouring a dyspeptic constitution.

I grumbled as others did at the necessity of attending chapel several days in the week: I complained also of the mathematical lectures, which were adapted to the least mathematical of the class. The classical lectures were given by Connop Thirlwall,

the present Bishop of St. David's, and these I fully appreciated. Going up as I did with no one to guide me, I wandered in my mathematical course, and changed my private tutor twice: beginning with Whiston, then going to Phelps the present Master of Sidney-Sussex, and ending with Hopkins, the crack coach of the day.

The first year I read steadily but a little too widely; deviating into the doctrine of chances. In the last term, to work without interruption, I got up at three or four o'clock, lighted my fire, had some breakfast, and got some fresh unbroken hours: one day having gone to bed at nine and got up again in the dark, I heard a noise down stairs, found that it was hardly midnight, and sleepily made out that I had had only two hours' sleep. I did fairly in the Trinity examination: but returning home, I became aware that I had worked too much: I had book-sickness, with a disgust of diagrams and equations: however, I soon got over this.

Not going up from a public school, I had no circle of friends ready-made: my only acquaintance was W. D. Watson, an old schoolfellow, who afterwards wrote two or three books; but tired of waiting for a due appreciation of his abilities, became a periodical writer, and for a short time editor of the *Manchester Guardian*. I had an agreeable circle of friends however, who at the time I left met three or four days of the week in each other's rooms to take their few glasses of wine.

The three years passed at Cambridge, or in preparing to go there, were eminently useful to me; not so much in the knowledge I acquired as in

the intellectual training I passed through: they left me a different man from what they found me; far less desultory in my pursuits, and with a much greater power of vigorously investigating any difficult and elaborate subject.

This concluded my scholastic career. If I have since read, conversed, debated, written, I have only done what others also have done without scholastic teaching. The sketch I have given, may explain under what circumstances I have formed the opinions I am about to propound.

II.

IF I am asked what education is,⁽⁴⁾ I may choose to say that it is the training young people in the art of living. Or I may adopt the more elaborate language of an anonymous writer, who suggests thoughts of Plato and of Matthew Arnold as Plato's expositor.⁽⁵⁾

"Liberal education professes to fit persons for leading a harmonious and beautiful life; it does not prescribe recipes for gaining a livelihood, or indicate this or that as a good trade to follow. What it says in effect is this: 'Come and sit at my feet, and you shall be made wise and cautious and painstaking. You shall leave me with your faculties disciplined and improved, so that whatever you find to do in the world you will be able to set about it in a workmanlike way. I will not teach you to be a father or mother of a certain kind, or a husband or wife of a certain kind, but I think I can promise to turn you out a more perfect man or woman than you were when I found you. Instead of having an empty mind, swept and garnished for everything that is noxious, you shall have a mind abounding with all manner of good store, and a disposition to add to these inner riches for your own pleasure, and to impart them to others for theirs.'"

Now this definition and this description, include more than an Englishman generally understands by the word education: they include the development of the whole youth, body and mind; whereas he understands principally the development of the intellectual being. A Frenchman would not make this objection; for to him education is the practice of developing the faculties, physical, intellectual, and moral: school education is to him *instruction* or *enseignement*: the general development is expressed by the new verb *éduquer*.

It is impossible of course to separate instruction from moral training: when you require a boy to learn a proposition of Euclid, you induce him by fair means or foul to overcome his tendency to idleness: but the same may be said of a master tailor who makes a boy ply his needle: the moral development is in both cases incidental. In boarding-schools there is a great deal more than this, because the master takes for the time the place of the parent: in France boys are kept from doing harm by living in a sort of barrack; in England much latitude and some licence are connived at.

What now, should a father aim at in educating his son? All will agree that he should train him to be industrious, temperate, prudent, reverent, just, generous, public-spirited: but as to school instruction there is great variety of opinion.

Let us see what Dr. Johnson thought.⁽⁷⁾

“Mentioning Milton’s and Cowley’s scheme for reading natural history in schools and colleges, he combated the opinion, and said: ‘Those authors, therefore, are to be read at schools, that supply most axioms of prudence, most principles of moral truth, and most materials for conversation; and these purposes are best served by poets, orators, and historians.’”

A physician of the last generation, maintained that with regard to men generally things might be left to their natural course: the learned languages ought to be the staple of grammar schools, not because they suited the world at large, but because by teaching them to all you found out the few who were fit for the church and perhaps the other learned professions, and took those few out of the common herd to be the leaders of men.

Half a century ago, ignorance was generally thought the safest condition for the labouring classes: even the middle classes were recommended to avoid spoiling their sons by over much school. We have now banished these narrow opinions to the Mormons, among whom:⁽⁸⁾

“Education is an anomaly. Children are put to labour, and attend school only when they cannot work . . . Education is held to make men intelligent, thoughtful, and sceptical; and for this reason the leaders fear it, while the children dislike it, and the common people regard it as unnecessary, if not as a positive evil.”

This fear of intelligence and scepticism is not confined to Utah: it is inevitable among those persons (very different from Mormons) who regard this life as nothing in itself, but only as a preparation for another: many Wesleyans I am told share in this fear; and Roman Catholics cannot but suspect an intellectual training which naturally leads to *liberalism* and rebellion against authority.⁽⁹⁾ The Jesuits it is true, early became eminent for their teaching: but this only proves that they were resolved to do in their own way, what must be done somehow.

Even among educated and liberal persons, there may be found a suspicion that for some minds school instruction, beyond the mere elements, is an injury. The late Mr. Toulmin Smith gave it as his opinion that such instruction would have spoiled both Cobden and President Lincoln.⁽¹⁰⁾ It would certainly have so much changed them that they would have ceased to be the Cobden and Lincoln we knew: but would they not have been something much greater? less racy perhaps, but of broader and more complete views? Take the reverse case: imagine Pitt, Fox, Marquis Wellesley, Mr. Gladstone, Sir Roundell Palmer, without the scholarship that has distinguished them: can we suppose that they would have filled a wider space in the world's history?

An old friend whose opinions I reverence,^(10A) differs from me here, and maintains that the self-taught man excels the school-taught man, just as the field flower excels the hothouse flower. I reply that the field flower is inferior to the lawn flower: the dog-rose though beautiful is below the damask or the maiden-blush. The well-educated boy is not a hothouse plant: he has been placed under conditions favourable to growth: he has been made, no doubt, to learn certain rudiments; but he has been also taught to teach himself. Good schools, far from hindering self-education, promote it: men who have been well taught as boys, not forced as hothouse plants, but exposed to the influences favouring development, go on in after life educating themselves: Lord Derby, Mr. Gladstone, Sir Roundell Palmer, have not stood still since they left the school and university; they have not confined themselves to

the duties of statesmanship; they have gone on through life educating themselves. The difference between a school-educated man and a self-educated man, is that the one enters on manhood in the possession of those rudiments and of that intellectual culture which the other must painfully and imperfectly acquire in hours stolen from other pursuits. Mr. Charles Knight⁽¹¹⁾ seems to me correct when he says of a man of neglected education, that "like too many self-teachers he dreams away the precious years of youth in desultory reading—purposeless, almost hopeless;" and afterwards speaks of "his desultory reading, to the neglect of all systematic acquirement."

It is quite possible that Mr. Toulmin Smith, if unhappily he had not ceased to speak for himself, might have replied that as to the general question of self-education he quite agreed with me; and that in what he said about Cobden and Lincoln he only meant that their defect of education fitted them for the position each of them held, as the representative of ordinary middle-class sentiment: he might have added that schools should be regulated to suit the common run of boys and not the exceptional genius.

I repeat the question; what should be a father's aim? I answer; to give as much education as possible, without interfering with his son's prospect of maintaining himself. The qualification in the last clause is sometimes overlooked. For myself, I feel strongly that an industrious and independent and resolute mind is far more important than a highly cultivated understanding; and that the first aim should be to give a boy the instruction and

tastes which will afterwards enable him to live. Now for commercial pursuits, a boy may acquire by the time he is thirteen, all the rudiments which are necessary; and if he is intended to be a clerk he may well leave school at that age.

If however, he is to come into an established business with the expectation of becoming a principal, he may well complain in after life, if he is removed so soon. He will find afterwards that he is at a great disadvantage when he gets into the society of better educated men. He will frequently not understand what they are talking of, or their illustrations and allusions: a Latin quotation in a book, or a Latin name in a museum, abashes him: let him be the severest democrat imaginable, he finds that there is such a thing as intellectual rank, and he feels that his place is a low one. He may get wealth and outward consideration, but he cannot pass over into the class of the educated. It is this experience which often makes him intent on bringing up his own sons in a very different fashion, and urges him to anxiously inquire what means to adopt. He does not justly appreciate mental cultivation, for how can any one justly appreciate what he does not know? He judges of it by its results, and seeing these, concludes that mental cultivation is a thing much to be desired.

But putting aside these inferior motives, let us look at what the aims should be in the case of a father who is himself educated, and who can afford to make his son the same.

The first aim should certainly be to call out and improve all the faculties of a boy: so that he may observe

what is around him, may exactly remember what he has seen, may easily make his own the words, facts, ideas which offer themselves in books, may draw correct inferences, may sympathise with what is true, just, and generous, may appreciate the beautiful in nature and in art, may share in the pleasures of imagination. To do this is no easy task: but we may set before us an ideal at which we may aim: and we may be sure that this cultivation of the faculties, this development of the entire man, is far more important than the filling the mind with any amount of knowledge however great. So strongly have some thinkers felt that cultivation, and not the imparting of knowledge, should be the leading characteristic of education, that they have expressed their conviction in this exaggerated form; that the more useless a subject is the better is it fitted for a schoolmaster's purpose: thus, if the study of Arabic and the study of Latin would equally tend to cultivate memory, judgment, taste, imagination, they would prefer the study of Arabic. Such hyperbole requires no refutation.

I am myself strongly impressed with the necessity of teaching the rudiments of various subjects, even though that teaching did nothing towards calling out the faculties. I fear that at the present day this is too much forgotten. Yet it is of inestimable advantage in manhood to know the grammar, the inflections, the syntax, of ancient and modern tongues. It is equally important to learn such a skeleton of history as shall be always available: so that one may easily recollect the chronological relation of the First Olympiad and the foundation of Rome; of

Lycurgus and Solon; of Buddha and Confucius; of John the Baptist, St. Paul, the early Fathers, and the twelve Cæsars; of Mahomet, Charlemagne, and Alfred; of Mahomet II, Louis XI, Ferdinand and Isabella, and Henry VII; of Louis XIV and the Stuarts. Such knowledge is easily engraved on the memory of a youth, and gives to the later reading of history, a clearness and a meaning otherwise unattainable.

Of higher importance still, is the stirring up an inquiring spirit and a love of knowledge. In this respect the old grammar schools were sadly deficient; for boys leaving at 14 or 15, did not acquire any love for the Eton Grammar and the Gradus ad Parnassum; even though their taste were unconsciously improved by familiarity with Virgil and Cicero. I do not deny that there was a beneficial cultivation: I only insist on the fact that classical studies were seldom pursued in mature life. With men who remained later at school and proceeded to an university the case was different: we know that many eminent men conceived a fondness for classical study. Charles James Fox constantly read Homer, in order to sustain a greatness of spirit: Warren Hastings, the schoolfellow of Cowper at Westminster, retained such pleasing recollections of longs and shorts, that at the close of his stormy life, retiring to Daylesford, he exhibited every morning a new copy of Latin verse: Marquis Wellesley was distinguished for his skill in classical learning: the last Lord Derby, nourished, no doubt, by his familiarity with Homer, as Fox did before him, the brilliant and unfailing vigour which characterized him: Mr. Gladstone's

industrious and thoughtful studies exhibit the same devotion to the pursuits of his youth. But for the many, far other teaching is necessary, if they are to leave school with such a taste for what they have been learning, as to induce them to continue its cultivation.

Some there are who for these reasons would banish the learned languages from schools: long may it be before they attain their desires! Others would banish them on the ground that those languages are useless in the business of life. These last, I think, misunderstand the purpose of education: they imagine that school ought to fit men for money-getting: they do not understand that the business of education is to make men, and not to make manufacturers, clergymen, physicians. Now I say to all such philistines; if you merely want your son to make money, send him to a national school, where he will learn perfectly, to read, write, spell, and cipher: let him leave at thirteen: teach him by precept and example to get and save: point out to him examples of mayors and magistrates who beginning with nothing have become millionaires: speak with contempt of the *idéologues* who dream of books and lectures, and of the public-spirited who postpone their own business to that of the town, and of the philanthropists who share their means with the poor. Avoid cultivating his mind, lest he should acquire tastes incompatible with devotion to the counting-house. But do not send him to a middle-class school, and ask the master to cut out the higher studies which distinguish it.

I grant that there is a period of life when general

education must cease, and special education must begin. But with boys who are to engage in business this special education must begin in the counting-house, not in the school: with boys intended for the medical profession it must begin in the dissecting room and the hospital: with boys destined for the church, it must begin towards the close of their university career; unless they are Roman Catholics, in which case a life of enforced celibacy must, it is said, be preceded by an artificial and unwholesome seclusion.

This distinction between general and special education for the clergy is illustrated in an essay published in 1843 by the present Emperor of the French.⁽¹²⁾

“Southern Germany is unquestionably the country in which the Catholic clergy is the best informed, the most tolerant, the most liberal: and why is this? It is because the young Germans intended for the priesthood learn theology at the universities, in common with all candidates for other professions.

“Instead of being from childhood sequestered from the world, and getting imbued in seminaries with a spirit hostile to the society they live in, they early learn to be citizens rather than priests. Thus the German Catholic clergy are distinguished by their superior enlightenment and their ardent patriotism.”

If English fathers desire to have sons distinguished by superior enlightenment and ardent patriotism, let them keep them under general education as long as they can: but if they desire to have sons devoted to money-getting in business, or pursuing their medical career with a view to fees only, and with no desire for scientific advancement, or regarding the duties of a clergyman as cutting him off from participation in the literature and philosophy of the day, then let such fathers avoid all general instruc-

tion, and set their boys to learn only such subjects as will be directly useful in their respective pursuits.

III.

SUPPOSE now, that a father, resolved to have his son well educated, consults me as to what subjects the boy should learn. In Scotland, this question occurs daily: because even in the great schools, a man may decide what classes his son shall attend, and he pays for these only: a practice which I have seen highly praised, but which is condemned by better authority, and is being gradually abandoned since the example set at Inverness within the last seven years.^(12A) In England a father selects a school, and seldom presumes to dictate what shall be taught in that school: he ascertains what different schools teach, and chooses the one which teaches the subjects he requires. In England a father will only select his school after inquiring what subjects are taught in it.

I reply to my English friend's inquiry by first determining what can be taught to a boy who remains till 17, and afterwards by pointing out what must be dropped for one who is to leave at 15 or at 13.

What can be taught is to be decided by experience and not by conjecture. My experience has convinced me that a great deal can be done, and this without so much work as to hurt the health: and I may anticipate so far as to say, that it is only by short hours and unfailing attention to bodily and mental health, that a great deal can be done.

To be well educated at the present day, a man must know five languages; English perfectly, Latin and French thoroughly, Greek and German fairly. I include under this head, grammar, geography, history. He must be master of four books of Euclid, a good deal of Algebra, with some application of these to mechanics at the least. He must be expert in free-hand drawing and sketching from the solid. To all these we have now to add some chemistry and chemical physics: for it is getting discreditable for a youth to be ignorant of the nature of the ordinary phenomena around him, and to run the risk of going through life believing that earth and air and water are elemental substances.

I am familiar with the objection, that such a variety of instruction tends to make a man jack of all trades and master of none: I reply that if a man were whimsical enough to go through life pursuing all these subjects, just as he did at school, fearing to disturb the balance of his faculties by enlarging or curtailing his proportionate knowledge of any one of those subjects, he would in fact be master of none. Here comes in the distinction between general and special education: between the education of the boy and the education of the man. We are concerned here with that of boys only. At what period of life the youth should be treated as a man, and should pursue one subject mainly, is open to discussion. Cambridge acts on the supposition that all her undergraduates are men; and allows them, subject to slight exceptions, to follow either mathematics or classics only: Oxford regards itself more as a place of general

instruction. If Cambridge should adopt the proposed practice of imposing a reasonable examination at entrance, such as the *little-go* which now takes place during the second year, and should extend it to all or most of the school subjects I have mentioned, then a special addition afterwards to mathematics or classics would cease to be objectionable; because at 18 or 19, general education might fitly cease. At any rate for the present we are discussing the case of boys of 17, and it can hardly be contended that at that age it is desirable to enter on special subjects.

But among the middle classes, a majority of fathers cannot afford to keep their sons at school till 17. Suppose 15 be the age of leaving: in that case adopt the advice given thirty years ago, by an eminent Greek scholar, the late Mr. Charles Kennedy: drop the teaching of Greek: in schools for boys who generally leave about 15, let Greek be altogether omitted. If 13 be the limit, German must certainly give way, and I am afraid mathematics: but I would not myself abandon Latin or French, without which a knowledge of English literature is impossible; a boy well taught from 5 to 13, may spare time for a sound knowledge of the elements of these two languages.

But my boy has a distaste towards language and an incapacity for it. That is a reason why he should apply himself to it. If his legs were weak, would you let him be constantly riding, and so turn him into a spindle-shanked groom? If his arms were deficient in muscle, would you recommend him to abstain from fives and cricket and gymnastics, and addict

himself to running and jumping? Education should strengthen the weak limbs and the weak faculties. Talk to those who at school had a difficulty in learning languages, but who were required to go through the regular course: if they were fortunate enough to have a master who did not treat defect of word-memory as a crime; if they were persuaded and gently compelled to make daily efforts to correct their weakness, they will now tell you that their principal obligation to their school is for this distasteful compulsion. There are a few boys whose disgust towards language is invincible: I can say on the testimony of many experienced masters, that such boys are very rare.

In this matter of subjects to be taught, there are two distinct questions: what subjects are good in themselves and therefore fit to be encouraged by authority; and secondly, what subjects, under the actual circumstances of the present day, a man should adopt for his son. As to the former and greater question, there must be some doubt, since we find men of eminence ranging themselves on both sides: as to the latter I have myself no doubt.

A father resolves to have no Latin: he must do one of two things; choose a school where no Latin is taught; or ask in a Latin-teaching school to have his son put out of the regular course. In the former case, he is nearly certain to get a very inefficient master, unless he is content to send his boy to one of the working-class schools subject to the Privy Council inspectors, where up to 13 excellent rudimentary instruction is to be got. But according to the prevailing notions, this is a degradation;

besides that the tone and discipline of such schools are unsuitable to the sons of the middle classes. What is generally done is to obtain as a favour, that a boy shall learn in a middle-class school, something else while his companions are engaged upon Latin. The best advised masters decline such an arrangement: but where it has been adopted the result has been this; that the boy put out to work alone, trifles away his time: several fathers who have tried the experiment with one son, decline to repeat it for a second.

After all, under actual circumstances at any rate, the father is wrong. To know no Latin, is to one who mixes with educated men, a very considerable misfortune. It causes a sense of inferiority: it compels occasional confessions of ignorance: it incapacitates a man from fully understanding the best English authors. That this is true is shown by the eagerness and persistence with which in after life the want of Latin is supplied by painful effort.

As to the value of Latin in itself, there is much to be said; though it must be conceded that the knowledge of it is not of the same importance as it was formerly. In the middle ages Latin was the language of the Church and of all the learned. In the last century it was the common tongue of Europe. When St. Simon was sent by his friend the Regent on a special embassy to Spain, he hoped that his Latinity would facilitate his intercourse; and though he was disappointed, this was only because the peculiar French pronunciation made the words unintelligible to Spanish ears. We find Sir Robert Walpole conversing in bad Latin with his

Hanoverian Sovereign : George III disproving the random charge against his mother of having purposely kept him in ignorance, by breaking out into Latin when he was in an insane passion.⁽¹³⁾ At the Sutton Coldfield grammar school to which I have referred, Latin dialogue was so much practised, that my father was able in middle life to carry on a conversation with an Italian visitor.

At present this incidental value is gone. I do not feel myself capable of adding anything to the oft-repeated exposition of the higher value which remains. Yet I find it hard to believe that we can spare the study of Latin and Greek ; the languages of the greatest poets, the greatest orators, the greatest historians, the greatest thinkers, the world has produced : nor will anyone I suppose, contend that we can really know Homer, Æschylus, Thucydides, Horace, Cicero, or Tacitus, in English translations.

One of the greatest advantages of sound education is the correction of pride and self-conceit : a boy when he has begun to learn, an adult who has taught himself a little, greatly overvalue their acquirements : a nation ignorant of its neighbours' literature, and unfamiliar with the intellectual achievements of Greece and Rome, too readily believes itself the leader of the world's civilization.

Our moral philosophy, our social sympathies, are far higher than those of the ancients, among whom domestic slavery poisoned the sources of goodness. But as citizens we have much to learn, and we may see in the ancient republics how individualism should yield to public spirit.

Neither M. de Tocqueville nor Mr. J. S. Mill is

suspected of being reactionary : yet both of them are supporters of classical studies.⁽¹⁴⁾

“On this account, among others, we think M. de Tocqueville right in the great importance he attaches to the study of Greek and Roman literature; not as being without faults, but as having the contrary faults to those of our own day. Not only do those literatures furnish examples of high finish and perfection in workmanship, to correct the slovenly habits of modern hasty writing, but they exhibit in the military and agricultural commonwealths of antiquity, precisely that order of virtues in which a commercial society is apt to be deficient; and they altogether show human nature on a grander scale: with less benevolence but more patriotism, less sentiment but more self-control; if a lower average of virtue, more striking individual examples of it; fewer small goodnesses, but more greatness and appreciation of greatness; more which tends to exalt the imagination, and inspire high conceptions of the capabilities of human nature. If, as every one may see, the want of affinity of these studies to the modern mind is gradually lowering them in popular estimation, this is but a confirmation of the need of them, and renders it more incumbent upon those who have the power, to do their utmost towards preventing their decline.”

No one I believe, will propose the study of mathematics in the place of that of classical literature: most will agree that there is an age at which a boy should pursue both. Arthur Young goes rather out of his way to give two apt authorities on this matter.⁽¹⁵⁾

“For there are some general advantages which mathematics may bring to the minds of men, to whatever study they apply themselves, and consequently to the students of natural philosophy; namely, that these disciplines are wont to make men accurate, and very attentive to the employment they are about, keeping their thoughts from wandering, and inuring them to patience of going through with tedious and intricate demonstrations; besides, that they much improve reason, by accustoming the mind to deduct successive consequences, and judge of them, without easily acquiescing in anything but demonstration. (Boyle.)”

Lord Bacon is equally clear.

"In the mathematicks I can report no deficiency, except it be, that men do not sufficiently understand the excellent use of the pure mathematicks, in that they do remedy and cure many defects in the wit and faculties intellectual. For if the wit be too dull, they sharpen it; if too wandering, they fix it; if too inherent in the sense, they abstract it. So that as tennis is a game of no use in itself, but of great use in respect it maketh a quick eye and a body ready to put itself into all postures; so in the mathematicks, that use which is collateral and intervenient is no less worthy than that which is principal and intended. (*Advancement of Learning.*)"

I remember reading somewhere that Bishop Watson, being consulted by a young man as to his course of reading, advised him to abstain from logic, and to master the early books of Euclid instead. At Oxford too, it was formerly permitted and perhaps is still, to take in either Logic or Euclid.

On the other hand, Sir William Hamilton, in a well-known essay, in 1836, protested against the exclusive or predominant study of mathematics, and supported his opinion by a formidable array of authorities.

"The question does not regard the value of mathematical *science*, considered in itself, but the utility of mathematical *study*, as an exercise of the mind."⁽¹⁶⁾

"The stream of opinions, and the general practice of the European schools and universities, allow to that study, at best, only a subordinate utility as a mean of liberal education;—that is, an education in which the individual is cultivated not as an instrument towards some ulterior end, but as an end unto himself alone; in other words, in which his absolute perfection as a man, not his relative dexterity as a professional man, is the scope immediately in view."⁽¹⁷⁾

"Descartes," says Voltaire, "was the greatest mathematician of his age; but mathematics leave the intellect as they find it. That of Descartes was too prone to invention. He preferred the divination to the study of nature. The first of mathematicians produced nothing almost but romances of philosophy."⁽¹⁸⁾

We might be disposed to class these censures with

that which I find in the life of Gibbon,⁽¹⁹⁾ who congratulates himself that he escaped from this study "before his mind was hardened by the habit of rigid demonstration, so destructive of the finer feelings of moral evidence." But Hamilton takes care to quote from mathematicians themselves.

"We shall content ourselves with the remark, that if mathematics (as is asserted with sufficient reason) only make straight the minds which are without a bias, so they only dry up and chill the minds already prepared for this operation by nature."⁽²⁰⁾ (D'Alembert.)

"It was now a long time since Descartes," who was 28 years old, "had been convinced of the small utility of the mathematics, especially when studied on their own account, and not applied to other things. There was nothing, in fact, which appeared to him more futile than to occupy ourselves with simple numbers and imaginary figures, as if it were proper to confine ourselves to these *bagatelles* without carrying our view beyond."

These censures are, I believe, perfectly well founded, when confined to the sole or excessive study of the one subject: most persons will acknowledge the truth of the following passage.

"We shall first of all admit (says Klumpp) that mathematics only cultivate the mind on a single phasis. Their object is merely *form* and *quantity*. They thus remain, as it were, only on the surface of things, without reaching their essential qualities, or their internal and far more important relations—to the feelings, namely, and the will—and consequently without determining the higher faculties of activity. So likewise, on the other hand, the memory and imagination remain in a great measure unemployed; so that, strictly speaking, the understanding alone remains to them, and even this is cultivated and pointed only in one special direction. To a many-sided culture, to an all-sided harmonious excitation or developement of the many various powers, they can make no pretension. This, too, is strongly confirmed by experience, *inasmuch as many mere mathematicians, however learned and estimable they may be, are still notorious for a certain one-sidedness of mind, and for a want of practical tact*. If, therefore, mathematical instruction is to operate beneficially as a mean of mental cultivation, the chasms which it

leaves must be filled up by other objects of study, and that harmonious evolution of the faculties procured, which our learned schools are bound to propose as their necessary end.”⁽²¹⁾

M. Chasles, the great French mathematician, has lately exhibited for the benefit of Europe, the one-sidedness and want of practical tact spoken of by Klumpp. The facts are too recent and too notorious to need much repetition.⁽²²⁾ M. Chasles showed his own good faith, by laying out sums said to amount to £6,000, in buying from a clever fabricator, manuscripts of Newton, Pascal, Shakspeare, and others: some of them destructive of Newton’s unsullied glory. No one disputes the verdict of Mr. W. G. Clark, that the buyer’s “own honesty and simplicity of character made him the victim of an unscrupulous scoundrel.”

The *Daily News*⁽²³⁾ quoted from Dugald Stewart part of a paragraph already quoted by Hamilton, and made some smart comments.

“‘In the course of my experience,’ says Dugald Stewart, ‘I have never met with a mere mathematician who was not credulous to a fault; credulous not only with respect to human testimony, but credulous also in matters of opinion; and prone on all subjects which he had not carefully studied to repose too much faith in illustrious and consecrated names.’ M. Chasles attending the Academy of Sciences with his documents is as much an object of compassion as Miss Flite coming to the Court of Chancery with her documents. Moses Primrose exchanging the Vicar of Wakefield’s horse for a gross of green spectacles made a good bargain compared with M. Chasles’s purchase for £6,000 of the letters of Julius Cæsar, Newton, Pascal, and the Apostles.”

There may be differences of opinion as to the predominance of credulity among mathematicians: some may contend that scepticism is their more striking characteristic: all however, will agree that

the habit of requiring demonstrative proof, unfits the mind for weighing such evidence as we obtain in the affairs of life.

To teach mathematics alone therefore, is to deliberately stunt and distort the mind: yet I believe that in due subordination the study has great importance. Men naturally have a disinclination to thinking out problems of any kind: they either see the solution at a glance, or they give it up: to revolve and re-revolve it is too much for their indolence. Mathematics furnish a means of correction.

I can offer two examples. The first occurred when I was at Hazelwood School. An algebraical problem was given to us as a voluntary exercise: the question had reference to a boat sailing with or against the tide; and we had a week to find the answer. The desire of success overcame our inertia, and by inducing us to think steadily a very important step was taken in correcting our mental indolence.

The second example occurred much later, when I was at Cambridge. I had stayed up my first Christmas vacation, and I employed myself principally in reading Peacock's Algebra. When I got to the Doctrine of Chances, I of course worked out all the problems for myself, and finding a difficulty in getting at one result given in the book, I paused long upon it. The question, I think, was: what is the probability in a hand at whist, that each player should have an ace? After trying again and again, and still arriving at an answer different from the one in the text, my suspicion was strengthened that the book was wrong: but for an undergraduate to correct so great a don as the

popular tutor of Trinity, was too great a triumph. I spent perhaps a week, putting imaginary packs of cards into all possible divisions, studying the principles of the doctrine; and sitting or walking this problem was never out of my thoughts. It turned out when term began, that the text was known to be wrong, and therefore I had no triumph. But I had what was much better: in searching for an imaginary treasure I had cultivated my power of attention, and had made it far easier on future occasions to overcome my natural intellectual indolence.

The teaching of physical science to boys is comparatively a novelty: though the school in which I take the highest interest, began chemistry and botany nearly twenty years ago. One great thinker, Mr. Herbert Spencer, would make science the groundwork of education. If science could be taught only by sacrificing languages and mathematics, there would be room for abundant discussion: but the truth is that if school hours are well applied there is room for natural science as well as languages and mathematics. I know no other publication upon this topic so good as a short paper by the Rev. W. Tuckwell, the head of Taunton College School, who explains what he has actually done.⁽²⁴⁾ The subjects he recommends are experimental mechanics, chemistry, botany, and physiology. It might be supposed that a large part of a boy's time would be required to go through this course: but he says, "the time to be given to science should not be less than three hours a week;" that is perhaps one-twelfth of the whole of school hours. Mr. Tuckwell

believes that boys who go to a school young, and remain to a reasonable age, might get through his scientific course in this moderate time.

If the contrary were true; if science could be taught only by trenching considerably on other studies, I should hesitate. The advantage of mathematics in conquering intellectual idleness, I have already pointed out. For younger boys, the study of Latin seems to supply the same benefit. When I see my own boys writing an exercise, I ask myself what there is in science which can be turned to the same account. A mere child is required to turn three English words into Latin: a nominative, a verb, and an accusative: he is obliged to think in order to apply the rules according to which the problem is to be solved. As he gets older, the exercises become more difficult, step by step, with a steady graduation. Then as his intellect is more matured, he has mathematical problems to solve, and these keep up and further strengthen his power of attention, and his habit of thinking.

I do not at present see how this graduated scale of training is to be replaced by teaching science. Botany may do something, because a boy may have a flower put into his hands, and may be required to describe it and declare its character. But this cannot be done with a child, and it has not the extent or graduation of exercises in language.

Some few boys addict themselves to chemistry; but even supposing that every boy had access to a laboratory and really made experiments, children could not share in this, and the amount of thinking done would not be very great. Exactness, neatness,

patience, constancy, are qualities worthy of cultivation; but they will not take the place of that intrepidity of intellect which shrinks from no problem, but rather rejoices in a struggle with difficulties.

Highly then, as I approve of such a scientific course as the one laid down by Mr. Tuckwell, I should be sorry to sacrifice in its favour the linguistic and mathematical teaching already established. Happily, such sacrifice is unnecessary, since three hours a week can well be spared, where Latin and Greek verses are abandoned.

I have already protested against the opinion that the only object of a school is to cultivate the mind; and that therefore, the subjects taught are matters of indifference, if only they are good instruments of culture. It seems ludicrous to say that you ought to get the best steam plough, and chain harrow, and scarifiers, and then grow nothing on your land. A boy so brought up, hates his teaching, throws his Virgil and his gradus into a cupboard, and rushes into real life with a cultivated understanding and no appetite for intellectual food.

Compare with this, another boy, who with nearly as much mere cultivation, has also been inspired with a love of modern literature; who knows enough of science to take an interest in the discoveries of the day; who watches the progress of chemistry and physics; who observes in the country every flower he sees: such a boy becomes a truly educated man, fit for any pursuit, and able to spend his leisure hours with the highest satisfaction of which his nature is capable.

IV.

IN my last section, I have made a long list of subjects necessary for a liberal education: five languages, the elements of mathematics, natural science; all to be taught soundly so far as they are taught at all. Hearing of such a curriculum for the first time, a man brought up on bare Latin and Greek, is rightly incredulous: the only answer to him is, come and see. He will then object that such results must be attained at too great a sacrifice: by a forcing-system; by neglecting the health and vigour of the body; by long hours and severe discipline. I reply that the contrary is true: that it is only by keeping up the health and vigour of the body, by short hours and by gentle discipline, that these results can be attained. What Dean Swift said of custom duties, may be said of school hours: two and two do not make four: six and six certainly make less than six.

But the first question a father asks, is where he shall send his son. To a private tutor? Certainly not, unless your son's case is exceptional. Ill health or nervous irritability, may possibly require such an arrangement; but for a boy of fair strength of body and mind, the companionship of numerous school-fellows is essential. On this point, experience is decisive. Theorists of the last century thought otherwise. Filangieri,⁽²⁵⁾ for example, granting the necessity of public education to make citizens, but still maintaining the superiority of private education to make men, writes thus:

“If we have to form only a man, home education seems to me the better; but if we have to form a nation, public education is preferable. The youth educated by the government will not be an *Émile*: in the absence of government intervention, you may have an *Émile*, a city; but you will have no citizen.

“If on the domestic hearth, a perfect education is extremely rare, because it requires the happy concurrence of nature, art, and circumstance: if the master must possess every virtue, singular abilities, a gentle and peaceful temper, unwearied constancy, a deep knowledge of man and of his development; if he must devote himself the day through to observing and directing his pupil, while concealing his attention from the pupil: if this master, besides these powerful agencies, needs a favourable disposition in his pupil, a high moral tone in his parents and in all those around him: if a single wicked or stupid person may by a moment’s conversation destroy the labour of years: if during the long course of this education, there must scarcely be a single event which is not either arranged or utilized for the consummation of the pupil: if facts rather than words, example rather than precept, experience rather than rule, must form and complete a man: if the art and career of the tutor must be so concealed from the pupil, that he may see in his director only a companion, a confidant, a friend: if curiosity should attract to instruction, liberty to labour, pleasure to occupation: if everything necessary to maintain order and to stimulate progress among public-school boys is a fundamental error in private education; if the regulating clock of the one should be banished from the other; if the uniformity inevitable in the one should be carefully avoided in the other; if emulation, the necessary spur of the one, becomes in the other a source of vanity and envy: if, in a word, a throng of circumstances are indispensable to a perfect education, and can hardly be hoped for in a single case, how can they be combined in public education?

“Yet what could be expected from education if it were absolutely individual? How few men, even in the largest community, would be so circumstanced as to give a good education! And among this small number how few would be willing as well as able! how few would succeed!”

“Thou hast persuaded me,” said Rasselas, “that no man can be a poet.” Thou hast taught me, O Filangieri, that no man can be educated: that Rousseau’s *Émile* would not be a man but a dwarf, clipped, distorted, espaliered.

Yet Filangieri has not misrepresented Rousseau's opinions.

“But business, public and private duties. . . . Ah duties! no doubt that of a father is the last. We need not be surprised if a man whose wife has disdained to nurse the fruit of their union, disdains to educate it. No picture is more charming than that of the family; but the absence of a single feature disfigures all the others. If the mother is wanting in health to be a nurse, the father will be too busy to be a preceptor.

“A father, in begetting and maintaining children, fulfils only one third of his task. He owes men to his species, he owes to society sociable men, he owes citizens to the state. . . . Neither poverty, nor toil, nor human considerations can free him from the necessity of maintaining his children and bringing them up himself.”

Experience has proved the erroneousness of these views. We know by repeated observation, that home is not the best place for instruction, and that a father is seldom the best of teachers: we know that in most cases a boy brought up without numerous companions, becomes either indolent or conceited or both: we know that when at length he goes to a university or into the world, he goes astray for want of that training which a more public education gives.

A large school then, is necessary: where is this to be found? Must it be a Rugby, or is a neighbouring grammar-school sufficient? In England it is thought better to send a boy away from home; in Scotland, since Adam Smith, it is thought better to let him live at home, and attend a large day-school: each country approves its own practice.

So far I am a Scotchman; but only in those cases where a large and excellent school is within reach. And how few are those cases! Besides; I make an exception for all boys born to great wealth or to title. The young lord or young squire will be petted

or neglected in the parlour, flattered or corrupted in the stable and the servants' hall. Then there are the cases in which several boys are nearly of the same age; the father probably, little at home: for the sake of the mother's quiet and health, some must be sent away. After making all these deductions there remain but few families in which the Scotch practice is possible: since they must live near a large and good school, must not be possessed of great estates, must not have a number of boys nearly of an age.

I suppose I must add as an exception, families which have rapidly grown rich; where the father is illiterate, and desires to make gentlemen of his sons; and is therefore advised to send them to Harrow or Eton. I am not sure that the advice is good; because I suspect that the difference between the home and the school is too great, and tends to ill in the mind of the boy. After a short stay at Eton he comes home and finds his parents uncultivated: with manners not those of refined society; using language of a forbidden kind; with a pronunciation uncouth at best: if he does not despise his father and mother, at any rate he is ashamed of them in the presence of his schoolfellows. Is not this divorce between the boy and his parents, a terrible price to pay? Probably it would be wiser in such cases to get near a large school and keep the boy living at home, and afterwards send him to Oxford or Cambridge, where the youths being much older, are in less danger of looking down on their home.

I regard with much sympathy a milder form of

the same ill-founded boyish contempt: in which a workman who has made money, gives his son a middle-class education, and too often reaps as his reward, an affectation of superiority on the part of the son. Thus even improvement of education, one of the greatest of benefits, brings with it some drawback of ill.

I have conceded that as regards the upper classes, and a large proportion of the middle classes, it is necessary to send boys to board away from home. But I believe at the same time that to do this involves a considerable sacrifice of the unnoticed, gentle influences of domestic life; besides the exposure to juvenile corruptions, most of which arise in the idle hours of evening, and not in the school-room or on the play-ground.

I am told that these evils are trifles when compared with the advantages conferred by a public school. If any one wishes to estimate these advantages fairly, let him read the evidence given before the Public School Commission; or if that task is too laborious, let him turn to the *Fortnightly* for 1865,⁽²⁶⁾ where he will learn from Mr. Anthony Trollope what Winchester and Harrow were in his time. A much darker estimate is given by the editor of the *Dublin Review*;⁽²⁷⁾ whose opinions, no doubt, will carry the less weight because he is one of the *perverts* to Rome. Speaking of two questions, he says:

“One of these is public school education: concerning which the editor feels intensely; for he spent the six unhappiest years of his life under a system which (so far as his own bitter experience goes) he considers *unmixedly demoralizing and hateful*.”

Few publications did more than the *Saturday Review* at one time to decry private boarding schools and to exalt public school life. Yet one of its critics, in a notice of Mr. Mayor's *Roger Ascham*, ventures to take a different view.⁽²⁸⁾

"In our own days, we have heard the popular head-master of one of our great public schools preaching the fallacy that Ascham inveighed against, and telling us solemnly that youthful innocence must bear the contact of vice because the world is bad, and, soon or late, all men meet corruption. We might as well believe that butterflies are the better for having all the various colours of their downy wings brushed off, or that anything fresh and tender, after it has been bruised and scorched with withering furnace blasts, is fitter for the rough uses of the world. Erasmus was right in saying that such experience is the schoolhouse of fools, and Plato spoke truly when he insisted that the soul of man should converse with nothing but what is pure and beautiful until it be matured, whatever it may have to meet in after life."

We should remember the low estimate formed by Dr. Arnold; who was so disgusted with the inevitable vice among these boyish crowds, that he doubted the utility of Etons and Rugbys. I cannot speak from my own experience: but I remember that during a year or two when I boarded at Hazelwood, there was enough to disgust any parent who knew it: and I hear from my friends that there is far worse among the elder boys living in the masters' houses at the public schools. *Tom Brown* gives a considerable list of peccadilloes or worse; bullying, duck stealing, swearing, drinking: but there is besides, a whole class of abominations to which he does not and dare not allude. Judging from my own experience, a boy living at home and attending a large school, escapes a great part of these corruptions.

I do not undervalue the manly qualities developed by cricket, football, rowing : but against these must be set the miserable intellectual condition of the great schools ; where little is taught and that little badly ; where a few industrious are coached beyond their strength for University honours, and the many are left in primitive ignorance : to say nothing of the foolish contempt apt to be generated for the business in which a boy's father may be engaged, or for the dissenting congregation to which he may belong.

My advice then is that my lord and Sir John should send their sons to public schools, submitting them to inevitable corruptions to avoid worse at home : but that the town middle class should, whenever it is possible, keep their sons living at home and attending a large school in the daytime.

I have said that an educated man ought to know five languages ; and that this task may be accomplished. But subsidiary means are not to be neglected. The Russians, we know, are great linguists : they are made such by early training ; by having English and French and German people about them. This means of instruction has been too much neglected among us ; though of late years I have copied some of my neighbours in having a German nurse for my children, and with apparent success.

As to French I think the ordinary course a mistaken one. A boy learns from a competent master, knows something of the grammar, and perhaps can read an easy book. Then, at 16 or 17 he goes to France for six months. He carries

with him the English pronunciation, which would take him six months to unlearn if he were a child, and which being a youth he does not unlearn. He returns knowing a good deal of the face of Paris, little of its manners, less of its accent.

I have tried a quite different practice: that of sending my boys at 11 or 12; before they go to a great school. I have guarded them against English pronunciation by keeping them as far as possible, before they go, ignorant of even the simplest French phrases: thus they learn a living tongue as they learnt their own, by hearing it spoken. I have been struck by an accidental illustration of the greater purity of language acquired in this way.⁽²⁹⁾

“Scholars from country districts where Welsh is usually spoken by their parents are often unable to understand what the master says for a considerable time after they come to school; and even after they know English sufficiently to understand him, such pupils often think in Welsh, and have to translate into Welsh the lessons they receive before they fully comprehend them, and this makes them seem dull and slow. Many children who learn English forget it as they grow up; but where they learnt it when young, it is striking to notice that though they know it very imperfectly, they *speak with such a good accent and so grammatically* that their deficiency very often is not perceived at first.”

This good accent and grammatical expression are what a boy going young to France, and living among the French, may hope to acquire; besides a familiarity with the ordinary phrases of every-

day life. Like the Welsh youth he will afterwards lose a large part of his acquirements. But if the Welsh youth had daily lessons in English after he returned home, and if he occasionally spent a month in England, he would retain far more of his knowledge: so by regular lessons at school, and by devoting a Christmas holiday to a visit to a Parisian family once in every second year, the loss of French may be much lessened. If boys generally got this early familiarity, there need be no loss; because the lessons given afterwards by the French master to his class, would be directed to keeping up and improving the knowledge acquired in France.

The late Mr. Cobden, himself speaking the language, and setting a high value on the acquirement, induced his friends to found an international school, for the purpose of doing what I am recommending, by bringing foreign boys here, and sending English boys abroad: that school is flourishing under the head mastership of the celebrated Dr. Schmitz; but unfortunately the purpose of its first promoter has been forgotten, and the boys are taught French and German in England.

Some parents send their children abroad for several years. I should hesitate to do this, because there is danger of losing familiarity with English modes of thought: and without pronouncing that these are in themselves better than French or German modes of thought, I am convinced that they are better for an Englishman. Six months abroad at 11 or 12, are harmless in this respect: the same may be said of an occasional visit of a month. A German nurse and a half year in Paris early in life, followed up

as I have suggested, will greatly facilitate a boy's progress: besides the mere lessons given, there is the early familiarity with the fact that there are other great nations besides the English, and other magnificent capitals besides London: there is an expansion of the child's mind such as nothing but experience can effect, and a tone of reality is given to the school tasks in geography and history.

One of the difficult problems in education is, to decide what amount of pressure should be put upon children. There are those who theoretically, would put on no pressure, but would get work done by persuasion and allurements. A boy in this case must be allowed to follow the bent of his own mind: must be permitted if he pleases to become a linguist only, or a mathematician only, or, what is far more likely, to pursue botany, chemistry, physiology only.

But this is not education, the business of which is to develop the man; and therefore to pay especial attention to weak limbs and weak faculties. I have known a boy who had a genius for mathematics, and who but for illness and premature death, would have been at least very near to the place of senior wrangler; but in whom a memory for words was so deficient as to make the acquisition of language a painful labour: I have known another in whom all other faculties were unwillingly exercised, because the genius for music was predominant; a genius shown by the compositions which a very short career left behind: I have known a third whose love of learning languages made the pursuit of exact studies hateful: these three were school-fellows and went through the regular course with

other boys. The indulgent system I have mentioned, would have left one to become a great mathematician, with all the narrowness, the hardness, the credulity or ill founded scepticism of his class: it would have left another to ripen prematurely into a musician, but wanting that culture which belongs to an early educated man: it would have left the third a bookworm, ignorant of mathematics and science.

These are extreme cases: I hear from the masters of schools that there are few boys who have much difficulty in pursuing all the studies of the regular course. Even if it could be maintained that boys of decided genius would be best left to nature, that would not justify such neglect generally. Let those pronounce, who having been carelessly instructed in the skeleton of knowledge, are unable to remember the multiplication table, or do not know the order of our monarchs since the Conquest, or are ignorant of the dates of the First Olympiad, of the Foundation of Rome, of the death of Julius Cæsar, of the birth of Mahomet, of Charlemagne, of Alfred. Such gaps in a man's knowledge are hard to fill up in later life, when the mind is occupied with cares and the memory has lost its freshness: and the continuity of a man's acquirements is so broken as to render them of comparatively little value.

However wise then, it may be in a mature man to endeavour to excel in one special branch of knowledge, it is necessary for schoolboys to become familiar with the elements of many branches. Some pressure therefore, is essential, in order to stimulate and regulate youthful efforts. But it does not follow

that much pressure should be used: a forcing system must indeed be carefully avoided. In a recent journal there occur the following remarks: ⁽³⁹⁾

“Some days ago a letter in the *Times* from the pen of a well-known physician called attention to the unfortunate effects of the prize system at schools as overweighting the nervous apparatus and encouraging premature and excessive brain work. . . . The immature mental powers of boys are in their action impulsive, irregular, and undisciplined; but for that very reason the work or study suitable to them ought to be regular, complete, well graduated, and in careful proportion to their strength in respect of severity and length. Every effort of thought causes a small but definite consumption of cellular tissue and nervous force. The effect of too prolonged ‘brain sweat’ or ‘brain fag’ on boys, is commonly to induce nervous irritability and exhaustion; with older men it causes a rapid wearing out of the vascular system. Fits, a brain fever, or a permanently dulled intellect are the lot of the first; paralysis or apoplexy terminates the career of the last.”

I do not agree with the writer that the giving of prizes ought to be abandoned, any more than I agree with an old friend of my own that emulation ought to be repressed. I am sorry for the master who is deprived of the use of such stimulus: I am sorry for the boy who has to travel along the dead level of duty, without that excitement which turns labour into something like a game of skill. I acknowledge that competition may be carried to excess: I see that this is the case at Cambridge, where nervous depression, brain fever, an utter sluggishness in after-life, constantly await the reading men.

But what is wanted in schools is a clear understanding on the part of the masters, that short hours and moderate exertion form the true regime; and a positive determination on the part of the head master that a boy shall not be raised from one form to another prematurely.

It is important also that parents should learn the same lesson. Only the other day I was told by a gentleman that his son had done extremely well at the grammar-school, having risen rapidly at an early age into one of the highest classes: but, he said, he was obliged to take the boy away, as his health was not good. I asked him whether he thought that the rapid promotion had caused the failure of health: such a notion had not occurred to him.

I have found ignorance of this danger, and a thoughtless desire of seeing a boy slaving and getting promotion, very prevalent among parents who themselves enjoyed little instruction. Such men, without experience of mental fatigue, and bitterly conscious of the disadvantages of ignorance, see only one side of the matter, and require to be restrained from urging their sons onward.

How can we be surprised at this, when we find such an accomplished scholar and gentleman as Evelyn, making the following record in his Diary?⁽³¹⁾

“1867-8: 27th January. After six fits of a quartan ague, with which it pleased God to visit him, died my dear son Richard, to our inexpressible grief and affliction, *five* years and three days only, but at that tender age a *prodigy* for wit and understanding; for beauty of body a very angel; for endowment of mind, of *incredible* and rare hopes. To give only a little taste of them, and thereby glory to God, who ‘out of the mouths of babes and infants does sometimes perfect His praises,’ he had *learned all his catechism*; at *two years and a half old* he could perfectly read any of the English, Latin, French, or Gothic letters, pronouncing the three first languages exactly. He had, before the fifth year, or in that year, not only skill to read most written hands, but to decline all the nouns, conjugate the verbs regular, and most of the irregular; learned out ‘*Puerilis*,’ got by heart almost the entire vocabulary of Latin and French primitives

and words, could make congruous syntax, turn English into Latin, and *vice versâ*, construe and prove what he read, and did the government and use of relatives, verbs, substantives, ellipses, and many figures and tropes, and made a considerable progress in Comenius's *Janua*; began himself to write legibly, and had a *strong passion for Greek*. The number of verses he could recite was prodigious, and what he remembered of the parts of plays, which he would also act; and, when seeing a Plautus in one's hand, he asked what book it was, and being told it was comedy, and too difficult for him, he wept for sorrow."

More there is of the same complexion; making altogether one of the most amazing of passages. Poor Evelyn! One hesitates which to admire⁽³²⁾ most; the child's accomplishments, or the father's madness. Suppose the boy had lived: what could he have become but a pedant?

"A bookful blockhead ignorantly read,
With loads of learned lumber in his head."

Quetelet⁽³³⁾ has some excellent remarks on this subject.

"I do not know whether we have any exact observations on the influences exercised by studies generally on the constitution of children and youths. The subject is worthy of careful examination; and especially now that many parents, through injudicious anxiety, and sometimes through a detestable vanity or cupidity, bring up their children as if in hothouses, to enjoy prematurely their flowers and fruits. Abundant examples have proved how ephemeral are such fruits, and how often a premature death is the result; few of these prodigies have maintained their reputation beyond the limits of childhood, or have resisted the strain of the excessive efforts required from an organization unequal to the work imposed. We shall have the opportunity of inquiring under the head of insanity, how far an excess of study, especially in the exact sciences, may cause a predisposition to this frightful malady, or may even utterly ruin the happiest organization."

I cannot say that my own experience accords with M. Quetelet's, as to the increased forcing which

he attributes to the present time: on the contrary, I observe a happy relaxation of pressure. Fifty years ago we were expected to read the Bible at four years old: now, many of us do not set our children to learn their letters before five; the age at which little Evelyn had a competent knowledge of Latin and a passion for Greek.

As regards the precocity of children, there is a distinction which may reconcile the conflicting opinions, of those on the one hand who hold with Quetelet, that disease and insanity and mental ruin naturally follow from early and severe study; and of those on the other who point to a list of distinguished men who were remarkable for infantile ability. Some children are early brought forward by considerable pressure put upon them; by regular lessons firmly enforced at two or three years old: other children spontaneously shoot up into knowledge, by imitation of older children, and by picking up the crumbs of the study table. It is the former class which suffers: the latter may be left alone if there appears no unusual irritability.

It is generally from these children of spontaneous growth that have sprung the distinguished men cited: though it must be remembered that other distinguished men have been late in development. Among the clever children there was Goethe.⁽³⁴⁾ "He was in fact a precocious child." . . . But his "precocity was nothing abnormal. It was the activity of a mind at once greatly receptive and greatly productive." Of Jeremy Bentham it is related⁽³⁵⁾ that "he knew his letters before he was able to speak:" that at little more than three he

was found seated at a reading desk, with a lighted candle on each side, absorbed in Rapin's *History of England*. Jeremiah, the father, however, was not wise enough to let him alone, but blindly ran the risk which ended so fatally in Evelyn's case. The following entry appears in his accounts: "*Ward's Grammar*, 1s. 6d.; *Fani Colloquendi Formulæ*, 6d.; and *Nomenclator Classicus Trilinguis*, 8d.; being 2s. 8d. for Jeremy Junior." The child was under four years old.

Charles James Fox was a very clever child; and was praised at the early age of fourteen for the unboyish quality of sagacity.⁽³⁶⁾

Pascal had a singularly wise father, who restrained the passion for thought which he early exhibited. His sister says:⁽³⁷⁾

"As soon as my brother was of an age for conversation, he gave proofs of an extraordinary understanding by his apt little replies; but still more by his questions on the nature of things, questions which astonished every one. The high expectations raised by this beginning, were entirely fulfilled: for as he grew his reasoning powers steadily increased, so that he was always far above his age."

His father however, was awake to the dangers of precocity and pressure: his leading maxim was, to keep the child always above his work; and therefore he would not let him begin Latin till he was twelve years old.

But the most remarkable circumstance was the struggle between father and child about mathematics; a subject the rudiments of which are generally abhorrent to the young. According to the sister:⁽³⁸⁾

"My father was an excellent mathematician, and often had at his house other men of the same pursuit; but desiring to make a linguist of my brother, and knowing mathematics to be a subject which fills

and absorbs the understanding, he determined to keep my brother ignorant of it, lest he should be led to neglect Latin and other languages. He therefore locked up all his books on mathematics, and refrained from talking about them with his friends when my brother was present. But notwithstanding these precautions, the child's curiosity was aroused, and led him to beseech my father to teach him; but the request was refused, or granted only conditionally as a future reward if he would master Latin and Greek. My brother one day asked my father what mathematics were: my father replied in general terms that they taught men to make exact figures, and to find the proportions of them to each other: at the same he forbade him to talk or think about them any more. But the boy in his playhours reflected on what he had heard; and being alone in his playroom, he scrawled some figures with charcoal, trying to make for example, a correct circle and an equilateral triangle: then he studied the proportions of his figures. So ignorant was he that he did not know the names, but called a circle a round, and a line a bar. Then he went on to axioms, and arrived at demonstrations, going so far even as the 32nd proposition of the first book of Euclid. One day while he was thus busied, he was so absorbed that he did not see my father who happened to come in."

However much a cross examination of this witness might have reduced her testimony, it cannot be doubted that Pascal was a precocious boy: nor can it be disputed that he became a man of very high genius. It must be conceded however, that in material and mental health, he was far less fortunate than slower and duller men: his body being the slave of disease, his understanding rendered morbid by his addiction to demonstration, his morals petrified by the asceticism of his manhood.

I may support my opinion on precocity, by referring to a late article in reply to one in the *Saturday Review*, where it was said; "we nearly always find in the biographies of distinguished men, that at school or college they gave no remarkable sign of their future power; and even where this

is not the case, the predictions of greatness may commonly be traced to a time after the greatness had been achieved." The writer in reply, runs over a list of great men.⁽³⁹⁾

"Pitt, having done well at Cambridge, was in office at twenty-one, and was Prime Minister at twenty-four. Fox began his political career, and was already an actual power in the House of Commons at the same youthful age. Burke began his essay on the Sublime and Beautiful at nineteen. Canning was the most distinguished boy of his time at Eton. So also was the great Marquis Wellesley. The late Sir Robert Peel was the first man who took a double first class at Oxford. Dr. Whewell's success in the schools of Cambridge was as marked as the successes of his future career. . . . Mr. Gladstone was, beyond compare, the most distinguished young man of his time while an undergraduate at Christ Church, and he left Oxford with the highest reputation for ability, sincerity, and oratorical gifts. Sir Roundell Palmer was one of the best men of his year at Oxford, and like Mr. Lowe, was pointed out by university opinion as a man who must undoubtedly win a high place in life. The same was the case with Mr. Goschen, who took his degree with unusual distinction."

It is equally true that some distinguished men have been even inferior to the average of boys. George Stephenson, if I remember aright, could not read until he was almost a man. Quesnay, who with Gournay founded the great school of the *Économistes*, was not taught to read till he was eleven years old.⁽⁴⁰⁾ It seems strange that the genius of Stephenson and of Quesnay should have submitted to such ignorance. Brinsley Sheridan, the brilliant dramatist, the accomplished orator, was declared by his mother⁽⁴¹⁾ to have been one of the most impenetrable dunces she had ever met with; and at Harrow he was pronounced to be "a shrewd, artful, supercilious boy, without any shining accomplishments or superior learning."

Parents therefore, need not be alarmed, if they have an unusually quick child, or an unusually dull one : only let them gently restrain the one, and very quietly press the other forward.

V.

HOW many hours a day ought boys to be kept at work ? This is a vital question, on which there is a strange diversity of opinion and practice. It is one which forces itself more immediately on managers of schools ; but as to which parents also ought to be enlightened, lest otherwise they should be dissatisfied at seeing their boys spending what seems a large part of the day, on the playground. The hours have been gradually shortened in middle-class schools : since forty or fifty years ago work began at seven and went on till five, besides evening lessons ; but now I see nine substituted for seven, with an increased time given for dinner, and evening lessons no longer than before. Dr. Edward Smith however, in his *Dietary*, says that he finds schools still kept open nine or ten hours a day.⁽⁴²⁾

I have already said that if in education two and two make four, six and six make less than six : a boy who works unwillingly and apathetically twelve hours a day, will do less than one who works industriously and with a bright face six hours a day : besides that the one boy is happy, the other is a miserable slave. A striking proof of this superiority of short hours is given by our experience of the Factory Acts ; under which children from 8 to 13

are required to be at school half the day: it is alleged by some enthusiasts that these half-timers learn as much as other children who learn all day; it is stated on excellent authority that they learn decidedly more than half as much.

In Germany an attempt has lately been made to do away with afternoon school altogether, and as it is said,⁽⁴³⁾ with great success. In the absence of information as to what the hours were formerly, no lesson can safely be inferred. On the face of the experiment it seems that something still better might have been done. Under this new arrangement, all the school teaching will be given in the morning: but this does away with the immense advantage of distributing the school hours so that work and play shall alternate. A day school has always some disadvantage as compared with a boarding school, in which an hour may be taken before breakfast, two or three hours in the forenoon, and an hour or two in the afternoon. If in imitation of this German scheme the whole teaching is to be crowded into the forenoon, the last hour will find the boys weary and listless. The alteration would gratify the masters, who would have their afternoons to themselves: it would not suit the parents, who would have their boys on their hands half the day. Far better I believe, to begin at nine, and go on till five, giving ample time for dinner, and an occasional half hour on the playground for refreshment. We may take a lesson from the Jesuits, who as we are told in the *Curiosities of Literature*, have an old rule, that even men after two hours' application should relax their minds.

The French people claim to be the leaders of European civilization: their treatment of children at home is singularly considerate: they have forbidden by law the use of bodily punishment: yet their school organization is barbarous: ⁽⁴⁴⁾

“The fact is they keep their poor miserable boys in their school-rooms under strict surveillance for such a large number of hours each day, that lessons of two hours at a stretch, and perpetual writing of exercises which are never corrected, become necessary in self-defence. . . . The older boys in their lycées are in school, under actual surveillance, for twelve hours and a half a day, ‘douze heures et demie par jour’—we quote the actual words, lest our statement should seem a gross exaggeration—‘pendant lesquelles nos élèves restent sans mouvement, cloués sur leurs bancs et obligés à une application impossible.’ Impossible, indeed. And when they are released, their exercise consists of a ‘promenade paisible,’ with the exception of considerable groups of scholars who prefer to converse lazily and abstain even from walking.”

“Let any man, however robust, picture to himself what it is to have gone through the hot weather of the last six weeks in a crowded schoolroom, dressed in the stifling cloth uniform of the lycées, seated on hard benches during thirteen hours, with no other recreation to break the monotony of lessons than such as may be taken in a courtyard surrounded by high walls. Even in the juvenile school at Vanves, children of seven or eight years old are condemned to ten hours a day close confinement at their desks.”

So much for French civilization!

If one is asked how it is that a few hours will do more than twice the number, the answer is obvious: that learning lessons is not like bodily work, but when properly carried on implies a severe exertion of the brain: it has been called an intellectual gymnastic: and though a hearty man may labour at a mechanical trade ten or twelve hours a day, he could not run and jump and spar through those hours.

On the other hand, I shall not readily believe

with Mr. William Stuckey⁽⁴⁵⁾ that as to children of 10 to 13, "two hours in the morning and one in the afternoon is about as long as a bright voluntary attention can be secured." . . . "Long hours beget habits of inattention. Beyond three hours a day, attendance for purposes of intellectual improvement is useless."

I have heard it said that at Oxford, six hours a day are reckoned the most that a man should read: that is, a man who throws his soul into his task. Boys idle away a large part of their school time; but with shorter hours there is a better chance of getting steady application.

On the subject of holidays, there is a chronic warfare between the school and the parents: the masters feeling the need of much rest: the fathers regretting the apparent loss of time, and the mothers resenting the disturbance at home caused by idle boys. In Scotland commonly there are five full days every week, and Saturday is a whole holiday; in England there are two half holidays: one who has tried both arrangements prefers the English, as giving more alternation of work and rest.

The public schools have changed their terms from two to three, since railways have facilitated travelling. In day schools I see that four terms are still better: each term consisting of ten weeks; with holidays of a month at Christmas, six weeks at Midsummer, and a week both at Lady Day and at Michaelmas. These two latter breaks of a week, are a great refreshment to boys and masters. Probably a week might be well taken from Christmas and added to the other periods.

Men outside do not understand the necessity for so much repose: they find themselves able to dispense with it. Now I have already quoted the remark that schoolboys ought to be generally employed on intellectual gymnastics: this is equally true of the masters. None but those who have tried, or who have watched others, know how exhausted masters become after a few months' school work. Men of business and clerks do not fall into this state. Holidays therefore, are necessary in the one case and not in the other. It is the same with authorship: it rapidly wears the brain. Balzac said that after writing a novel he was in the condition of a woman after a confinement: he had brought forth his progeny and was bearing the pleasing punishment. I was talking one day to a banker: I mentioned that a certain paper paid two or three guineas for an article which might be written in three or four hours. Then, replied he, a man may supply three a day, eighteen a week, nine hundred in fifty weeks; and may earn £2,000 a year. He did not know that to write an article a day was reckoned at least enough for any man. For boys as for authors, much holiday is absolutely necessary: but it may turn out that shorter hours at work and shorter holidays may hereafter be adopted.

I have long suspected however, that another and a greater change is in store for our successors. One of the principal aims of education is the formation of a habit of industry: a habit which distinguishes the middle and lower classes from born gentlemen and from savages; who can make a great effort to spurt in a boat race, to head a

cavalry charge, to track and scalp their enemies ; but who are incapable of daily, unfailing, monotonous toil. Now our present arrangements barely succeed : they frequently beget listless habits in school, and laziness during the holidays. Might not we, while shortening the school hours, at the same time employ other hours in learning and practising handicrafts ? Gardening and farming in the country, carpentry in towns, might be really useful acquirements. The great theologian of the world was a tentmaker : we might have another tentmaker as head master ; a carpenter as second master ; farmers as ushers. All schoolboys would become half-timers ; and habits of industry might be formed, far beyond what are now possible.

One of the great difficulties in some schools at present is the enforcement of discipline. Bodily punishment is forbidden : but most masters have been brought up to use the cane and the rod ; and when these are taken out of their hands, they feel like a coachman who has dropped his whip.

Many persons believe that chastisement is in itself useful ; and that if passionless or perfectly just masters could be found, no better punishment could be inflicted. But such gross abuses commonly attend the use of it that it is thought safer to abandon it altogether. Formerly, it seems to have been thought that as a boy ought to bear pain with fortitude, it was necessary to hurt him as a means of instruction ; as though toothache and earache and headache and severe illness, would not give every child the means of practising fortitude, without having voluntary pains added to the sum of human misery. I remem-

ber reading with disgust, how a young boy in the fifteenth or sixteenth century, being sent to a friend who was a schoolmaster, was very soon flogged till he was sick, for no particular fault, but to teach him discipline. At Bristol Grammar School, thirty or forty years ago, the head master administered his beatings every Saturday for the past week: each boy got so many strokes for every offence recorded; and if none were recorded, he still got his strokes for offences which had probably escaped observation.

Such severity is sometimes fatal if it is persisted in. Madame Roland when a child, was required by her father to take some medicine: she refused and was beaten, but still refused.

“On m’auroit tuée sur la place sans m’arracher un soupir.”⁽⁴⁶⁾

After a struggle of two hours she yielded to gentle treatment.

“The details of the scene are as present to me, the sensations I experienced are as distinct, as if the affair was recent; the same rigidity I have since felt on solemn occasions; and I could as readily to-day proudly mount the scaffold, as I then defied barbarous treatment which might have killed me but would not have subdued me.”

Robert Owen^(46A) showed the same unconquerable obstinacy. Through a mere misapprehension of some remark, his mother reported him to his father as having disobeyed her; and then came a flogging with a whip often used on the other children, but which he had never tasted before. After refusing submission several times, each refusal being followed by a stroke, he at last said, “You may kill me, but I will not do it:” and so the contest ended.

For such children chastisement is misplaced. But

in all cases there is serious danger if the master inflicts it for offences committed against himself. My friend Mr. Arthur Hill⁽⁴⁷⁾ speaks of "that antagonistic and unwholesome excitement which, in greater or less degree, accompany the infliction of punishment:" and if this is true of all, much more is it true of violent punishment. A really excellent clergyman of my acquaintance, was once head of a grammar school: one of his former pupils, a very thoughtful man, was convinced that his old master felt a pleasure in beating the boys: and if anyone apologize for this as a satisfaction in exacting just retribution, I reply that such satisfaction in another's pain, comes perilously near to cruelty.

There are other abuses however, far worse than this. A master cannot help disliking here and there a boy who is ugly or loutish, who snuffles with a perpetual cold, who is rather deaf, altogether disagreeable: such a boy when he commits any offence will be thrashed twice as hard as the pretty, plausible boy; he is fortunate if he is not thrashed without any offence, when dyspepsia or an east wind ruffles the cane-brandisher. "Hates any man the thing he would not kill?"^(47A) Such an abuse is so so frequent and so inevitable, that I hold it to be fatal to the use of the cane and rod.

The danger from personal antipathy, and that from a master's irritability, are much reduced in public schools where a boy is sent up to be flogged by the head master: although to an outsider it appears humiliating to a man of dignity, to have to play the part of executioner. At Rugby forty to

fifty years ago, one of the assistant masters did some of the dirty work. Dr. Arnold on his accession found Dr. Bloxham installed in this office for the lower school; if I remember right, with a salary of £30 a year: but Arnold abolished this hangman's office and undertook the work himself; and his strokes were much sharper than those of his predecessor: I have heard it said that he made a great mistake in afterwards giving to the masters generally the use of the cane, in order to reduce the frequency of flogging by himself; instead of reserving all bodily punishment for his own hands.

After all, it is conceded that mild discipline fails with some boys; and in schools where this prevails, a head master is sometimes obliged to tell a father that he will do wisely to remove his son to another place where he will be treated with more harshness.

It is singular that in the United States, where liberty commonly runs into licence, the practice of corporal punishment is continued: nay, as we have lately heard, is applied to girls or rather young women at school. In France, on the contrary, it has been forbidden these eighty years; though it is still used by stealth.⁽⁴⁸⁾

"The French tribunals have just sentenced two reverend fathers of the College of Tivoli at Bordeaux, to a fine of 300 francs and ten days' prison, for having whipped a boy, whose parents brought the matter into court. The evidence showed that the lad had been severely chastised, and that all the other scholars had suffered corporal punishment. Flogging was declared illegal in 1792, when Lanthenas, an intimate friend of Marat's, presented his report on primary instruction to the National Convention. M. Charles Souvestre, making a jocular allusion to a pamphlet recently published by Monsignor Dupanloup, says that parents are now made aware how their children are educated 'sur les genoux de l'Eglise.'"

In England such chastisement is not forbidden: yet it is only tolerated: a master inflicts it at the risk of being summoned before a magistrate for an assault: an irritating incident.

To find a substitute for bodily punishment is certainly difficult. Impositions, solitary confinement, deprivation of sleep, are all open to some objection. As to grave offences, disgrace goes a long way. At Hazelwood, as I know, misbehaviour suffered quite enough retribution.

As to the discipline maintained among the boys themselves by fagging, which is properly a regulation and limitation of bullying, and not a cause of it, I say nothing, because I never experienced it. An article on the subject will be found in an early number of the *Westminster Review*,⁽⁴⁹⁾ with a critique of a pamphlet bearing the punning title, *Τοῦ φαγεῖν τί βέλτιον*.

VI.

IS a father wise in sending a son to a university? If he intends his son to be a clergyman, or a physician, or a barrister, let him do so by all means: but otherwise, not. Such is the ordinary answer.

Many persons may doubt whether it is possible for an Oxford or Cambridge man to settle down to an ordinary business or profession, requiring monotonous toil and unfailing attention to details. I reply by enumerating the men who have done so: I show that recently in Birmingham there were nearly twenty Oxford and Cambridge men, who were manufacturers, solicitors, land agents, or of

other trades or professions not requiring a degree. I do not pretend that these men excel others in their respective occupations; but I do not find that they fall short of others. The possibility therefore, is unquestionable. A father may have a just fear that his son, once at a university, will unwillingly enter into business: but he need not despair of seeing him active and industrious if he does consent to enter into it.

The danger would be far less if such education became common: a youth would follow the example of his neighbours, and would proceed as a matter of course from college to the counting-house. The danger is least of all where the father has himself set the example: because the son then grows up in the persuasion that the course is natural. In proof of this I may appeal to Scotland, where men of competent means usually send their sons to a university without reference to their subsequent destination: though the example is less conclusive because the youths at Scottish universities finish their course much earlier than the youths at Oxford and Cambridge.

But it may be asked what advantage I propose, in giving a boy an education which does not fit him for the avocation to which he is destined. I answer by another question: why do you keep your son at school after he is thirteen? You know that at that age he has been taught all that a man of business wants: reading, writing, spelling, arithmetic, geography, and a little history. Yet you let him remain two, three, four years longer. If you are candid, you will reply that you want to make a

gentleman of him : one able to mix on equal terms with the best men he will meet. The motive is a decent one, though it does not spring from the highest appreciation of the value of education. But be consistent : confess that your son, leaving school at sixteen, is not the equal of many he will meet ; of the clergyman, of the physician, of the barrister.

Besides ; the tendency of these democratic times is to make men valued more and more for what they are and less for what their fathers were : a man of high education takes a prouder place in the world than he did in the last century : men of *la vieille roche* may still believe that birth is preferable to desert ; and may tritely repeat that it is better to be an Honourable than a Right Honourable, and that the garter is the only decoration to be valued because it cannot be got by merit : the circle of such imbeciles is daily narrowing : the really educated man is rising in the scale. None the more fit for business ! I do not pretend that he is. But I know that he is much more fit for everything else : more likely to take up other pursuits for his leisure hours, and thus to escape the frivolities and dissipations of youth : better adapted to take a lead among his fellows ; and with a far better chance of avoiding the popular follies in philosophy, medicine, or religion.

And if there are advantages to the young men, there are others to the community. During the last hundred years ; while Great Britain has been converted from an agricultural into a manufacturing country ; while the great towns have increased fivefold, sevenfold, tenfold ; while the

manufacturers from being a humble race, have risen so high as to have their representatives among the very first of cabinet ministers: during this vast transformation, nothing has been done by government to promote the higher education of towns; the doctrine of *laissez faire* has been exaggerated into an excuse for indolence. Those towns are much indebted to the fathers who, knowing that their sons will have to earn their livelihood, have yet had the courage to give them a university education: who have not merely sent them with an exhibition in their pocket to get a degree and a fellowship, and to become clergymen or barristers, but who have brought them back with their degree, to follow the pursuits of their family. Such fathers have nobly done their part to raise the dull, dead level of mediocrity to which money-getting communities are in danger of falling.

Carlyle indeed, in his rough, rollicking way, asserts that the only use of university education is in its indirect results and not in the teaching.⁽⁵⁰⁾ Now Sterling, the subject of the biography in which this is said, was just the man to benefit by the thoroughness of university teaching, if his career had subjected him to it. It is said that Sterling had the wit and the argumentative power of Canning, but wanted the unflagging industry which made Canning the pride of Eton and Oxford, and raised him to the summit of political power. Compare the course of the two men: the one passing steadily through the school and the university: the other as a boy removed from school to school; then sent for a year to Glasgow; afterwards, coming up to

Cambridge, passing a year at Trinity College and shifting to Trinity Hall. The one became a ripe scholar, apt to work and wait: the other was volatile in character, desultory in study, unfit for steady application. Sterling's case is no proof that university education is bad: it is rather a proof that even such an education may fail if it is imperfectly applied.

That the old universities generally lag a little behind their time, may be the cause of the abuse often poured on them. Gibbon went up to Oxford in 1751-2, at fourteen, an ordinary age for entering at that period.⁽⁵¹⁾ Ill health had disturbed the regular course of his instruction; but he had of his own accord read widely. "I arrived at Oxford," he says, "with a stock of erudition that might have puzzled a doctor, and a degree of ignorance of which a schoolboy would have been ashamed." Such an irregular boyish career was a bad preparation for a university course: we must therefore make some abatement from his censures, when he lays it to the account of the public and private instruction of Oxford, that the fourteen months he spent there, proved to be the idlest and most unprofitable part of his life. No doubt he remembered that period with the more bitterness because it was then that he was perverted to the Roman Catholic faith by reading the masterly works of Bossuet: a man remembers with no satisfaction, an incident which draws from him an apology, however conclusive.

"I am proud of an honest sacrifice of interest to conscience: I can never blush if my tender mind was entangled in the sophistry

that seduced the acute and manly understandings of Chillingworth and Bayle."

Adam Smith had gone up to Balliol only a few years before Gibbon entered at Magdalene: but instead of fourteen months he remained seven years: from his seventeenth to his twenty-fourth year. The *Wealth of Nations* has some observations as uncomplimentary as Gibbon's.⁽⁵²⁾

"A private teacher could never find his account in teaching either an exploded and antiquated system of a science acknowledged to be useful, or a science universally believed to be a mere useless and pedantic heap of sophistry and nonsense. Such systems, such sciences, can subsist nowhere but in those incorporated societies for education, whose prosperity and revenue are in a great measure independent of their reputation, and altogether independent of their industry. Were there no public institutions for education, a gentleman, after going through, with application and abilities, the most complete course of education which the circumstances of the times were supposed to afford, could not come into the world completely ignorant of everything which is the common subject of conversation among gentlemen and men of the world.

"There are no public institutions for the education of women, and there is accordingly nothing useless, absurd, or fantastical in the common course of their education. They are taught what their parents or guardians judge it necessary or useful for them to learn, and they are taught nothing else."

It is surprising to find such a man as Adam Smith preferring the homely education of women to the learned education of men; and condemning not only Oxford, but universities generally, without making an explicit exception for his own university of Glasgow. No man had more sagacity than he had: but here that quality failed him, when he confounded together the Oxford of his time with the Oxford of all times, and the one university with all universities. We must also take into account the fact that Adam

Smith's singular kindness of heart was chequered with a certain bitterness of satire, which led him to condemn the world at large as for the most part knaves or fools; as though he had in his mind an ideal standard by comparison with which men stood condemned; and the application of which to places of education made their actual faults look even greater than they were.

Besides; schools and universities are moulded to suit ordinary men, and not those geniuses who can dispense with them. J. B. Say, another distinguished writer, condemned the French university.⁽⁵³⁾

"What Bonaparte called a university, was only a means, expensive for parents and vexatious for teachers, of assigning to public authority the privilege of instructing youth." To this it has been replied that:

"It cannot be denied that under this organization, the State absorbed the individual and took the place of the family; that everything was sacrificed to superior or to secondary instruction; while primary instruction was neglected. But it must also be conceded that in the actual anarchical condition of public teaching, it was necessary in this high branch of administration to adopt measures analogous to those taken for the reorganization of the various public services, during the consulate and the earlier years of the empire."

However deficient were Oxford and Cambridge in the last century, it is not denied that they have made great progress during the last fifty or sixty years: nor can we help being grateful to them for the labours they have undergone in establishing and carrying out the measures for improving middle-class education of boys, of girls, and of young women: the admission of youths at

Oxford, outside the colleges, at very low rates, is another proof of the zeal of the governing body. Both of the old places are fast becoming the universities of the nation; open to every student of every creed.

I have said that the old universities are apt to lag a little in the educational race. They have done so, I think, in not adapting their course to the present ages of their undergraduates. If youths still came up as they did formerly, at 12 to 15, the thing required for them would be the completion of their general education, and this might fairly be carried on for the three years preceeding the B.A. degree: having attained this, the young men might if they chose, apply themselves to special subjects during four years more, after which they might earn their M.A. degree; and they would then have finished their course as early as they do now. At present, a youth coming up at 18 or 19 ought to have finished his general education; and the universities might by an examination require him to prove that he had done this, before he was matriculated. Afterwards, he might follow special subjects.

Comparing the two, my preference would naturally be assigned to Cambridge, the residence of my youth: but truth compels me assign the palm to Oxford. Cambridge turns out profound mathematicians and admirable grammarians: Oxford turns out educated men. If indeed the young men entering at eighteen or nineteen, had already completed their general education; the fact being ascertained by a matriculation examination at entrance, this examination being conducted by the

university and not by the individual colleges; then three years of special study might be advantageous. Until that is done, I shall prefer the more general Oxford course.

I object also, to the severe competition at Cambridge, caused by the placing men in order of merit in the classes of the tripos, instead of in alphabetical order as at Oxford. The number of youths whose health is ruined by the strain, is frightful to think of: besides that during the three years the student is prevented from thinking out any question for himself, lest such a gratification should lose him a place; whereas a man who feels himself safe for a first class alphabetically arranged, has his mind at ease and at liberty for reflection.

There are those who prefer the London University for their sons. If they send them to University College or King's College they expose them to the dangers of London; no small evil in the eyes of men by no means straight laced. If they keep them at home and send them only to the examinations, they sacrifice the advantages of social intercourse with youths of the same age, and fail to rub off the provincial and family peculiarities; an attrition peculiarly necessary for those who have lived at home while attending a school. I hear it said of the London University undergraduates generally, that they are conceited and priggish as compared with those of Oxford and Cambridge.

I am not insensible to the benefits conferred on the country by the examinations of the London University. Every man who can spare a few days occasionally for examinations, may now read in his

leisure hours, and have his progress tested; with the satisfaction at last of earning a degree. This may seem to many as good as a degree obtained by residence and the examinations attending it: for as a well known thinker maintains speciously, it matters little where a candidate has resided, if he really possess the information required: since "as a man cannot have stolen his knowledge, he has no need to prove his title to it."

Now I have already given my opinion as to self-educated men: that they are the only men whose education is of much value; but then I use the term self-educated in its natural sense, not in its vernacular sense. Newton was in the natural sense self-educated, when he worked out his theory of gravitation and applied it to the heavenly bodies: Milton was self-educated when he used in illustration of the biblical history and doctrines, the poetical myths of Greece. In the vernacular sense, the self-educated man knows his disadvantage: he finds that the efforts he has made to supply the want of early training, have carried him at 18 or 20 years old, only to the point other men have reached at 12 or 14: he knows that if he had possessed early instruction, his efforts would have carried him far higher, while supplying the same mere intellectual training as that which he has actually gained.

But since there are, and probably will continue to be, a certain number of young men who are willing to study, and who cannot go into university residence, who must be even self-educated as far as higher subjects are concerned, it follows that the London University, which grants degrees upon ex-

aminations only, is a very useful institution. It by no means follows, that Oxford and Cambridge are useless. Their functions are different.

We all agree that for young men, a few years' intimacy with others of the same age is advantageous; and all the more so if they have lived at home while attending a large school; while it is absolutely needful for the unfortunates who have been taught at home or in the house of a private tutor. We agree too, that it is necessary to have learned societies, where men who have fully completed their general education, and who have shown their aptitude for study, may live in mature years, pursuing their special subjects, with the facilities given by public libraries, and the stimulus furnished by daily mutual intercourse. But putting these advantages aside, there remains another, more directly to our present purpose. A young man, living at home, willing to pursue the higher branches of study, may sometimes go on without assistance; but if so he must have a genius for those pursuits; and universities are not intended for the few, the geniuses of the world; they are intended for the many, who can learn under favourable circumstances, who are capable of high cultivation, but who cannot overcome difficulties without assistance, and cannot keep up to their work without stimulus.

Universities then, which require residence, bring together two classes of men who naturally coöperate: those of mature age, devoted to high studies, who as a condition of learned leisure give a small part of their time to teaching; and those younger men who require assistance and stimulus, and who cannot

get these at home, so well, or at all. The seniors are benefited by having to give assistance: the pupils are greatly benefited by receiving it. Let all universities become like that of London, and we should have few thorough scholars and a low standard of learning, though perhaps quite as much original thought. If Oxford and Cambridge pursue their reforms; insisting on a moderately severe matriculation examination, and thus shutting out the idle and profligate undergraduates; encouraging the pursuit of special studies; aiming more than at present to get men to think rather than merely to acquire the thoughts of others; assigning their fellowships, not as mere rewards for past undergraduate exertions, but rather as a means of furthering higher learned pursuits; then their utility will be manifest to the world: it will be seen that while examining universities have their place, residential universities have their place also.

On the whole then, I believe that the safest education is that obtained by keeping a boy to live at home while he attends a great school: that it is well to follow the Russians in having a German nurse: that at eleven or twelve a boy may advantageously spend six months in France: that if he has his own way to make in business he should leave school at fourteen or fifteen: that otherwise he had better remain till a later age, and even enjoy the benefits of an Oxford education.

VII.

HAVING considered what education is now required, what can possibly be attained, and what are the best means available, we are bound to verify our conclusions, by inquiring what our progenitors did, and what foreigners are now doing.

Among the middle classes formerly, as we have seen, boys were taken from school much earlier than we take them. A boy then, went into his father's counting-house at twelve or even eleven: we now think fourteen discreditably early: we regard it as a mark of the backwardness of the London middle classes that they adhere to fourteen. In the last century, a father who intended his son for business, and sent him to a university as a preliminary, would have been thought mad: he would have been foolish; because the youth alone so distinguished from his fellows, would have been very unlikely to settle down to monotonous labour.

It follows that the subjects taught are much higher than they once were. Seventy years ago, a manufacturer to whom I have already alluded, the son of a man of more than competent means, was sent home from a boarding school at twelve years old, with the advice that he should be removed, as he knew all that his master could teach him. This seems to give probability to a remark made by Bishop Temple,⁽⁵⁴⁾ that at present, "the average boy of fourteen is better informed than the average full grown man of some generations ago."

The master whom I have mentioned as having

exhausted his stock of knowledge on a boy of twelve, kept, of course, what we should now call a commercial school. A boy here and there, as I have said, went to a good grammar school: but even there, if he got a good deal of Latin, he got little else.

Speaking of the older Roman Catholic education, Auguste Comte says:

"This however, is the only true system of universal education which has yet existed; for we cannot grant the title to the so-called university education which metaphysicians gradually imposed, through all the West, since the end of the middle ages. It was but an extension of the special instruction which priests formerly received, and which was narrowed to little beyond the study of their sacred tongue, with the addition of the dialectical training necessary for the defence of their dogmas. Morals remained confined to theological education alone. In fact, this metaphysical and literary instruction has done little for modern transformation except by its critical efficacy, although it has incidentally aided the organic and above all the æsthetic evolution. Its insufficiency and irrationality have become more and more manifest, in proportion as it has reached the new classes, whose true destination, whether active or even speculative, required a quite different preparation. This so-called universal system too, never embraced the prolétaires; no, not even among the protestant populations, although every believer then became a sort of priest."

Since this was written, there has sprung up a general cry for rational instruction. Thirty to forty years ago, there were founded a number of proprietary schools, many of which proposed great improvements in their curriculum: too many of those schools have perished; but the grammar schools themselves are slowly submitting to the same influences. As regards the higher education, it is admitted that the universities have the power of fixing the standard, and that schools must conform to this. Now so late as 1827, the *West-*

minster Review⁽⁵⁶⁾ could complain that Cambridge had no professor of Moral Philosophy, none of Logic, none of Political Economy, on which last however, lectures were tolerated: it might have added that there was no professor of Chemistry. After looking down the present list of professors, and visiting the Oxford Museum, and seeing the undergraduates by scores busy in its laboratory, no one now could utter such complaints.

The London University too, has done much to encourage the pursuit of a wide range of topics: indeed, men accustomed to teaching Latin and Greek and little else, are bewildered when they look over the examination lists, and at once pronounce the system a bad one. I cannot allow that too many subjects are required at matriculation, because that examination ought to include all the varied school curriculum: the five languages, mathematics, and natural science.

I have my doubts whether a boy might not, after this test, be deemed to have completed his general education, and might not therefore be encouraged to devote himself to a single subject specially; just as at Cambridge, if the present little-go were strengthened and imposed at entrance, we should get rid of objections to allowing a man to follow mathematics or classics or natural science or law, exclusively. The theory would be that both the London University and Cambridge required a complete *general* education from the students at entrance, and encouraged *special* education during the university course.

If there is any truth in this as to men reading

for the B.A. degree, there must be far more truth in it as to men reading for the M.A. degree. In the London University, as every one knows, there is a formidable examination before a man can become a master of arts: this requirement is excellent, and one hopes that the old universities will soon follow the example: but would it not be better in all cases to examine for this degree in one subject only, so that an M.A. should have the attestation of being really superior in language, or mathematics, or science? Otherwise, the whole strength of universities is put forth for the promotion of general education.

If we compare the Scotch with ourselves, we find that in elementary education they are far ahead of us: that is in the country especially; for in the great towns the rapid growth and the extensive immigration of Irish, have outrun the means of instruction. One happy result of this excellent instruction of the labouring classes, is that in elementary knowledge the children of the middle classes far excel ours: coming to school already able to spell and sum well at an age when our children are ignorant of those elementary arts. The three counties of Aberdeen, Banff, and Moray, have risen above their former level since the application to them of the Dick Bequest, which was organized by Professor Pillans, and is managed by Trustees in Edinburgh. I am told that the villagers of these favoured Scottish counties, are as intelligent and inquiring as town artizans: the best of them meeting together in dark evenings, to discuss questions of natural and social philosophy: exhibiting an intel-

lectual standard seldom reached by English country people of whatever class.

It is acknowledged however, that in higher education the later generations of Scotchmen have not excelled, and have not produced eminent scholars. The Latin taught has, I hear, been generally good; but in Greek there was lamentable deficiency until Dr. Schmitz, at the head of the Edinburgh High School, introduced a better style of teaching.

Universities occupy a different position in Scotland and in England. In England hitherto, they have been the resort of the wealthy, except in the cases of Exhibitioners from grammar schools, of Oxford servitors now done away with, and Cambridge sizars who still exist. In Edinburgh and Glasgow the necessary expense is small; and a youth ambitious of a degree, may keep the terms and during the rest of the year work at his father's farm. The new Oxford scheme of permitting undergraduates to live independently of the colleges, aims at accomplishing the same object.

The Scotch High or Borough Schools are not so good as some have supposed: though the boys enter well prepared, they often make but moderate progress: this is explained by the insufficient number of masters, which makes the classes of a size altogether unmanageable. There is a practice also, praised by Mr. Fearon, but condemned by the far higher authority^(56A) of one who has tried it; a practice of allowing the fathers to select the subjects which their sons are to learn: thus making a regular organization of classes impossible. Even *bifurcation*,

a mild form of this practice, has broken down in France. A change too, has taken place in the public schools. Mr. Fearon says that there is less social distinction among classes in Scotland than among ourselves; and that children of all conditions sit on the same benches. This was the case in Sir Walter Scott's time, in Edinburgh: but now, as I hear, most men of any pretension eschew the High School, and send their sons to the "Academy." The evil has been aggravated by a change in the administration of Watson's Hospital, a great educational institution; in which formerly the boys were boarded and taught, but the funds of which are now applied to assisting the same class of boys at their homes, and sending them to the Edinburgh High School. It has been just the same in England: all classes formerly attended the grammar schools: now these are not good enough for those who can afford to pay high fees; and indeed in many places it is scarcely thought creditable for a rich man to let his son occupy a seat which a poorer man's son wants.

On the whole, I believe we shall find that Scotland has greatly the advantage of us as to elementary education in agricultural districts: that in middle-class education the two countries are nearly on a par; and that in the highest education, England, backed up by large endowments, is superior.

Comparing Great Britain with the Continent, a French author says: ⁽⁵⁷⁾

"Looking at the actual facts at present, we easily see that two opposite systems prevail among the principal nations of Europe; that of state intervention in education, and that of unlimited liberty. These two systems exist in their most naked form in Prussia and England respectively. In Prussia, since the law of 1819, families are

compelled by government to send their children to the public school, unless they can give them a competent education elsewhere." . . . "In England, on the contrary, education is left to the zeal and liberality of individuals or associations, acting through subscriptions or foundations."

When this was written, our Privy Council system was just begun. Since that time, we have made great advances towards the Prussian compulsory law: but only as to the elementary schools; for the instructed public is at present far from wishing to supersede grammar schools, proprietary schools, and universities, in favour of a governmental department. Government control and examination, by all means, but not direct administration!

If we are to believe a poet and critic, who easily slips into satire, the results of the English licence are not admirable. He tells us what foreigners say about us.⁽⁵⁸⁾

"What brings about, or rather tends to bring about, a natural, rational life, satisfying the modern spirit? This: the growth of a love of industry, trade, and wealth; the growth of a love of things of the mind; and the growth of a love of beautiful things. There are body, intelligence, and soul all taken care of. Of these three factors of modern life, your middle class has no notion of any but one, the first. Their love of industry, trade, and wealth, is certainly prodigious; and their example has done us a great deal of good: we too, are beginning to get this love, and we wanted it. But what notion have they of anything else? Do but look at them, look at their lives. Some of us know your middle class very well; a great deal better than your own upper class in general knows them. Your middle class is educated, to begin with, in the worst schools of your country, and our middle class is educated in the best of ours. What becomes of them after that? The fineness and capacity of a man's spirit is shown by his enjoyments; your middle class has an enjoyment, we admit, and gets on well in business and makes money; but beyond that? Drugged with business, your middle class seems to have its sense blunted for any stimulus besides, except religion; it has a religion, narrow, unintelligent, repulsive. All sincere religion does something for the spirit, raises a man out of the merely bestial

part, and saves him; but the religion of your middle class is the very lowest form of intelligential life which one can imagine as saving. What other enjoyments have they? The newspapers, a sort of eating and drinking which are not to our taste, a literature of books almost entirely religious or semi-religious, books utterly unreadable anywhere, but which your middle class consumes, they say, by the hundred thousand; and in their evenings, for a great treat, a lecture on teetotalism or nunneries. Can any life be imagined more hideous, more dismal, more unenviable? Compare it with the life of our middle class as you have seen it on the Rhine this summer, or at Lausanne, or Zurich. The world of enjoyment, so liberalizing and civilizing, belongs to the middle classes there, as well as the world of business; the whole world is theirs, they possess life; in England the highest class seems to have the monopoly of the world of enjoyment, the middle class enjoys itself, as Shakspeare would say, in hugger-mugger, and possesses life only by reading in the newspapers, which it does devoutly, the doings of great people."

Such are the opinions of Mr. Matthew Arnold, speaking by the mouths of foreigners: such he thinks are the results of the middle-class education of England as compared with that of the Continent. Mr. Arnold is a school inspector, and in that capacity has had to move about a good deal among towns, and therefore has seen much of the middle class: his testimony therefore, ought to have weight.

Yet as myself one of that class, I protest that this picture is so little like the reality, that it stirs my anger far less than a slighter satire would: the caricature is too gross to hurt any one.

The first proof of the lowness of condition among myself and my friends, is the narrowness of our enjoyments; which are confined to our business, our newspapers, our religion. That this is intended to apply to the middle classes generally, is clear from the statement that in England the *highest* class has the monopoly of enjoyment; and as the great industrial towns do not enjoy the presence of any

persons of the highest class, the whole of us are pronounced to be void of enjoyment, and leading a life than which nothing "can be imagined more hideous, more dismal, more unenviable." Am I not right in saying that the caricature is too gross to be very offensive? It ought to be a vast satisfaction to Mr. Arnold to hear that however unhappy we the middle classes ought to be, we do not find our life hideous, dismal, or unenviable. I fear we must say that Mr. Arnold has an unreasoning hatred of the middle classes, whom he regards as Philistines, enemies of the people of God, to wit of literary men: and that under this influence he picks up the brickbats within his reach, and throws them at us to ease his spleen.

It is strange that one who aspires to be a moralist, should have overlooked one source of enjoyment, especially open to industrious men: the enjoyment of family life. The highest classes rise late, dawdle over their breakfast, yawn over their letters and papers, struggle ineffectually with their invincible enemy, time. "Stretched on the rack of a too easy chair," they hardly know what repose is. The manufacturer, the solicitor, rise early, hasten breakfast, walk to their business, complain not of too much time but of too little, and after a busy day return to a home, the quiet of which is in itself a conscious enjoyment. They submit to an occasional dinner party, or concert, or lecture: but their highest satisfaction is the repose of an evening among their children. This life does not seem to me hideous, dismal, or unenviable: it may be Shakspeare's hugger-mugger, but if so, hugger-mugger is an

excellent thing: the very thing Shakspeare deliberately chose, when he retired to spend the evening of his days at little Stratford.

Mr. Arnold's sketch is more applicable to the town life of fifty years ago. Up to about that date, a man lived at his place of business: he went into his counting-house before breakfast and remained there till suppertime; taking an hour or two for his dinner and for his tavern club. Such a life might be described as hugger-mugger. It was the same in London: Miss Austen, in *Pride and Prejudice*, makes Elizabeth's uncle live in Gracechurch Street; and Bishop Daniel Wilson,⁽⁵⁹⁾ apprenticed in 1792 to a rich silk-merchant living in Milk Street, Cheapside, had to work from six or seven in the morning till eight in the evening: while another youth in the same warehouse said that for weeks together he never had his hat on, and that more than three years passed before he got his first holiday. At present, most of the middle classes live away from their business: even the shops have their upper rooms let off for offices. Commonly the house in the suburbs or environs has garden enough to furnish another wholesome pleasure, which even the stately Milton condescends to notice.

If we of the middle class lived at our places of business we should be more disposed towards those public amusements, the distaste to which makes our life "hideous and dismal." Hear a Frenchman's opinion.^(59A)

"The English generally, have their place of business and their house quite apart; they leave their family rather early in the morning, dine away, and in the evening are delighted to return

home after business is done, to pass a short time with their wife and children. The Frenchman on the contrary, nearly always having house and place of business under the same roof, is with his family all day, especially with his wife, if as often happens, she helps her husband in his affairs. It follows that in the evening, instead of desiring like the Englishman, to rejoin his family, he wants a change, and goes, as Dickens tells us, to a café or club, to smoke a cigar and read the papers."

It is strange that even a satirist should overlook the political importance the middle classes have acquired; and the success that has attended their struggles with the highest classes for predominance. Pass over the legislation of the last fifty years, which has discharged the arrears left by aristocratic government from 1688. Look only at the House of Commons and its leaders. Mr. Gladstone's father was a Liverpool underwriter and merchant; his grandfather I believe was of even a lower grade. Mr. Bright⁽⁶⁰⁾ is a manufacturer and a dissenter, and left school at fifteen to enter his father's factory; and his companion Mr. Cobden, son of a farmer, was a poor manufacturer. Mr. Forster is another manufacturer and dissenter: Mr. Stansfield is, or was, a brewer: Mr. Goschen till lately was a money-broker. These leaders of the nation belong to the Philistines, the enemies of the chosen race.

Mr. Arnold asserts that the middle classes are educated in the worst schools of the country. I reply that the highest classes, with whom he contrasts us, are mostly educated at Eton, which I take to be a far worse school than the good grammar schools and proprietary schools and private schools; whether we take instruction or morals into account.

It is a mistake to suppose that democracies are

indifferent to instruction: it is since the prevalence of democracy among ourselves that we have had an irresistible demand for improved schools. In the last century I find the following passage as to Switzerland.⁽⁶¹⁾

"But that which I have seen, heard, and observed in general, at Basle, with the most pleasure, is the action and reciprocal re-action of letters on the democratical manners. The youth are educated at the university: of whatever state the parents may be, their children are well instructed; because, being a part of the sovereignty, and eligible to be a part of the Government, it is necessary they should be instructed, and instruction in literature comprises the Greek and Latin authors. . . .

"What I have said is confirmed by facts which are so extraordinary in France, that they will be thought incredible; we have seen the third magistrate (the treasurer) who is a baker, who still sells bread, and who amuses himself with the study of the Greek and Latin poets. A butcher, also, has been named to us, who stirs not to go to a fair for buying cattle, without a Greek poet in his pocket. It is a spectacle interesting enough that there exists such a taste, and two examples of it prove more than anything I could say."

Similar superiority appeared at Zurich.⁽⁶²⁾

"I have found again here, what I had seen at Basle—a mass of knowledge—a love of literature and learning;—which might be thought an exaggeration. There are very few young people who, when they leave the college, to enter into any business, would not be able to read the Latin and Greek poets, at least Homer. . . . "Zurich has produced several celebrated men of letters, and this town must value itself upon having M. Lavater and Gesar;—We have seen them both.

"The first is known in France only by his work of *Physiognomies*, but he is both a poet and an orator; his name as a poet, is known by his poem on the Messiah."

This superiority of instruction has been handed down to the present generation,⁽⁶³⁾ as a recent writer shows.

"From Germany, let us pass into Switzerland. No country in the world is better supplied with schools. Look at Zurich for

example, which is perhaps in advance of the other cantons of the Confederation, but not very much. With a territory and a population about equal to those of a French Department, it has a university, a polytechnic school, a veterinary school and one of agriculture, two great classical and two great real schools, a normal school, 57 secondary and 365 primary schools. Many of these it must be noted, are deemed equal to the best in Europe. All these establishments too, from the highest to the lowest, are connected by a common organization."

I told you so, Mr. Arnold may say: behold the cause of Swiss superiority. I will reply by quoting Mr. Arnold's own words; which I will give as translated into French, fearing the result of a re-translation.⁽⁶⁴⁾

"L'esprit qui regne à Zurich, ainsi que dans les cantons les plus avancés de la Suisse allemande, est un esprit d'industrialisme intelligent, mais pas encore assez intelligent pour s'affranchir de la vulgarité. A Lausanne et à Genève, l'usage de la langue française et les traditions d'une vie intellectuelle plus raffinée ont introduit d'autres élémens; cependant, même dans ces villes, le mouvement des trente dernières années a eu pour effet de développer l'industrialisme de la Suisse allemande."

"In a word," says the French commentator, "high education is almost altogether wanting."

It appears then, that for a century past, the Swiss have excelled in the extent of their school teaching; but that at present, as partly in Scotland, and still more in the United States, the quality of the teaching is not high.

But look at their enjoyments, their evening meetings in the open air, their pure pleasures in common. I answer that those who live at their places of business as the continental middle classes do, who live on flats, without even the pretence of a garden, must needs turn out on a fine evening and seek for out-door pleasures. It cannot be disputed

however, that we get immense advantages in living away from our business cares, and in breathing a purer atmosphere: and for children, the having an open air play place where they may spend a large part of their days, is of inestimable benefit. I conclude that English education takes a far higher range than that of Switzerland, and that English enjoyments, though little seen, are decidedly superior to those “on the Rhine, at Lausanne, or at Zurich.”⁽⁶⁵⁾

Whatever may be thought of the quality of Swiss education, it cannot be pretended that that of North Germany is deficient in excellence: indeed we are told that nowhere else can we find primary and higher education both of them good. Even throwing together the whole of the German States, the academical provision is liberal.⁽⁶⁶⁾

“There are at this moment twenty-nine universities in Germany. The number of professors (Docents) engaged in lecturing at them amounted in the last term to 2,194; there were 21,542 students—a goodly array indeed. Yet there is not one fellowship to be gained through the length and breadth of the land, while a very good proportion of the men have to earn their livelihood as best they may during their academical triennium. There is, however, a movement on foot now for raising funds for the benefit of the poorer scholars, so as to enable them to give their minds exclusively to their studies; a movement to which we wish all success.”

We have a recent description of the German universities, by M. George Pouchet, who writes from his own experience.⁽⁶⁷⁾

“We still recollect the emotion with which as a student, we crossed for the first time the threshold of one of the great German universities. It was at Berlin. . . . The buildings are simple, as befits the palace of science. . . . The students are coming and going, with their note-books under their arms. . . . In the

thirty-two theatres, there are given every half-year, more than three hundred courses on all the sciences, mathematical, natural, social, and theological. Struck by this amazing activity, of which we had not conceived any idea even in Paris, we recalled to our thoughts France, which during the last century had imposed laws on all learned Europe; we remembered Goethe, who dying was more intent on the great struggles of the Institute and the Museum, than on the political revolutions of Europe. At the period when we thus witnessed the remarkable awakening of German study and science, hardly any Frenchmen were aware of that superiority which a few years later was to be acknowledged by everyone, and even by the government. Since that time Germany has made further progress. Who knows whether it is possible for us to regain our lost ground, unless by a prodigious bound, such as that which secured to France at once, the *Ecole Normale*, the *École Polytechnique*, the *Conservatoire des Arts et Métiers*, the *Bureau des Longitudes*, the *Muséum*?"

The English notion of a German university is that a crowd of youths are got together to swallow oceans of beer, and fight about trifles, with swords which wound but do not kill. The following paragraph therefore, written only last year, caused no surprise. ^(67A)

"There is a professor in the University of Bonn who is a bold man. A short while since he ventured to lift up his voice against the practice indulged in by most of his pupils of wearing their hair in matted locks flowing over their shoulders. This displeased the students, who look upon a shaggy poll as indispensable to a scholarly and metaphysical brain; and they went at midnight to howl at the professor, who was just then getting into bed. Instead of recanting, however, the professor put his head out of the window, and treated his pupils to a few homely truths couched in practical language. He told them he had lately visited England, and seen that at Oxford and Cambridge youths combed their hair and were none the worse for it. Furthermore that Oxonians and Cantabs managed to abstain from gashing their faces with rapiers in absurd duels and from making a habit of getting drunk with beer; and that nevertheless he found them much more scholarly and more civil than the gentlemen he had the honour of addressing. This said he shut his window; and the students, doubtless impressed with the solemnity of the harangue delivered by the erudite professor in his night-cap, withdrew to their homes, most likely to dream of hair cutting."

M. Pouchet says that even at the time he speaks of, the great boots and the duel were out of fashion at Berlin. We know however, that duels still take place among the students elsewhere. We cannot forget how Count Bismark's son was, quite recently, severely wounded in one of these youthful follies. Notwithstanding Count Bismark's alarm and anger at his son's danger, Prussia has not ventured to do more than regulate duels. Perhaps this is explained by the militarism which is the soul of the country; and the intensity of which justifies the saying, that Prussia is not a country which has an army, but an army which has a country. These are the regulations: ⁽⁶⁸⁾

"Art. I. orders the dissolution of all students' societies which contain members who are not subject to the jurisdiction of the academical authorities. By Art. II., every students' society must submit, within a month after the beginning of each quarter, a list of its members, together with a statement showing at what places and on what days its regular meetings are to take place. By Art. III., all students' societies whose members organize duels without reasonable cause, and which are formed for the purpose of duelling, are to be dissolved. Art. IV. provides for the rustication of any student who may fight a duel without being attended by a surgeon, and provided with the necessary apparatus in case of wounds. If the student belongs to a society, and the president of the society is shown not to have taken steps to prevent the duel from having serious results, the latter is also to be rusticated. By Art. V., a duel must be stopped at once if one of the adversaries has received a wound which requires medical care, and the representatives of the society to which they belong are made responsible for the due execution of this article."

Compare this fighting practice, regulated and more than tolerated by the law, with the peaceable habits of Oxford and Cambridge. Emerson speaks with astonishment of the fact, that in universities frequented by the most spirited classes of a nation

conspicuous for individual bravery, a duel is never heard of. With what contempt must young Virginians and young Prussians, hear of the incident, which whether real or fictitious fairly paints our students' manners: when two Christ Church youths inflamed with wine, determined to fight, and being placed opposite each other on the edge of the basin in the court, instead of receiving a signal to fire, were both shoved into the water by their seconds!

Some persons, seeing that the unendowed German universities have recently attained more distinction than the endowed English ones, have illogically concluded that the absence of endowments has caused the superiority. Let us see what a great German thinks on this point. ⁽⁶⁹⁾

"One thing, however, Dr. Von Sybel envies the English universities, and we shall all be curious to know what it is. It is not their discipline, or their studies, or their exclusion of Nonconformists, or their shelter to orthodoxy. It is their endowments. At a moment when every one in England has a hard word for our endowments, when Mr. Gladstone would tax them, Mr. Lowe pitch them into the sea, when Mr. Bright invites them to compare their stunted fruits with the majestic produce of voluntarism, when Professor Seeley shakes his head at them as hindrances to knowledge, when Mr. Hobhouse, the Charity Commissioner, proclaims that the shade of the pious founder stands in the path and blights every suggestion for improvement, at this moment stands forth a Prussian professor to say that 'here indeed, Germany may well cast her eyes over towards England in humble admiration, and envy an endowment of learning which exceeds the German endowment of it three times as much as the national wealth of England exceeds that of Germany.'"

Germany during the last sixty years has made wonderful progress, socially, politically, academically: the French revolution of '89, followed by the victories of Napoleon which crushed his neighbours, stirred the Germans into new life; not so much by making

them in love with revolutionary principles, as by exciting bitter resentment against France, and thus creating an ardent desire to be knit into a great nation, capable of making head against the Gaul on one side and the Muscovite on the other. Holland too, had its troubles, when with constitution overthrown, and temporary royalty extinguished, it became an appendage of France. Holland has made progress, far greater than the world at large is aware of: but its education has not advanced like that of Germany. The Rector of Lincoln tells us a good deal about it in a notice of a recent German book.⁽⁷⁰⁾

“University education in Holland is not nearly so diffused through the population as in Germany. The salaries of the civil, and other, services are too low to allow of so costly an education as a preliminary. It is a luxury of the richer class, not a preparation for official life. The number of students is consequently small. In 1865 Leyden had 566; Utrecht, 508; Groningen, 209. The Grammar-schools are being deserted for the Real-schools, which teach matters more obviously bearing upon life. With this indifference to liberal education is closely connected the low standard of attainment in classics both in school and university. Even the most eminent professors in Holland have to lecture down to an elementary class destitute of a taste for learning, and who are only there to get the requisite certificate. The rudiments of ‘classics’ are necessary, as with us, for the special faculty degrees; and this compulsory Latin and Greek *minimum* has a lowering effect upon the whole system. . . . Each of the Dutch universities is content with its two classical professors—one of Greek and one of Latin. The author compares this state of things with Bonn, a university of the second rank, yet with its ten professors of classical philology and cognate subjects.”

I may seem to have given too much space to the condition of universities, to which the middle classes generally do not go: but the universities determine the curriculum of the public schools; for what Oxford and Cambridge require, Eton and Rugby must teach. It is nearly the same with the

grammar-schools and the proprietary-schools. I am glad to quote so distinguished an author as M. Renan, to show that this interdependence is not peculiar to England.

“M. Renan⁽⁷¹⁾ has no difficulty in proving how unreasonable is this general indisposition to the higher instruction. To that levity which imagines itself to be doing a great work in depreciating it in favour of popular teaching, he shows that the one will fail if deprived of the other.

“‘It is the university which makes the school,’ he writes. ‘It has been said, that the conqueror at Sadowa was primary instruction. No, the conqueror at Sadowa was German science, German virtue, protestantism, philosophy, Luther, Kant, Fichte, Hegel. Popular instruction is the effect of higher culture among certain classes. The countries which, like the United States, have established a wide popular teaching without serious superior instruction, will long expiate their mistake by intellectual mediocrity, by coarseness of manners, by a spirit of superficiality, by a want of general intelligence.’”

Let us then reform our universities, as the best means of raising the education of all classes: let us away with a course which was suitable for boys of 12 to 17, and adopt one suitable for youths of 18 to 22: let us require our schools to complete the general education of their boys before they leave: let the universities ascertain by a wide and strict matriculation examination, that this is really done.

It will be noticed how severe are the remarks made by M. Renan on the mental condition of the United States. These remarks appear unjust through incompleteness and misapprehension of the facts. There certainly prevail throughout most of the States, an intellectual mediocrity and a spirit of superficiality: but the cause of these, I imagine, is something much deeper than the absence of high university teaching. For suppose that there were

distributed over the Northern and Southern States, twenty-nine universities, with professors of profound learning such as distinguishes those of Germany: would there be found scholars to fill the class rooms? Von Sybel maintains that the established three years' German course ought to be changed to a five years' course, now the field of knowledge is so much widened: would the professors be able to attract young Americans to remain five years, or even three years after they had left school? In a new country, with great material prosperity, and room for every enterprising man, where boys are brought up to depend on themselves for a career, the age of entering on the business of life is much earlier than it is among us: Mr. Peabody was a partner in a business, at an age when in England a boy is hardly trusted to fetch money from a bank. Enterprise, adventure, rapid progress, are inconsistent with profound knowledge. The fact of course remains, that the Americans are, intellectually considered, a very superficial people: not through any fault of theirs but through the irresistible force of circumstances.

Let us now turn to France, the country with which we have been accustomed to compare ourselves. There, as I have said, the boys are in school ten or twelve hours a day: in the Lycées they are surrounded by walls, and are without the means of playing at manly games: they are required to do a quantity of exercises which for the most part are not looked over: they are, or were lately, made to write three copies of these useless exercises, one for themselves, one for the

master, one for M. Duruy, or his successor as Minister of Public Instruction, if such minister is pleased to demand it. The effect on the boys' health may be imagined.

Englishmen can hardly believe that a nation, modernized by the revolution of '89, should retain an obsolete course of instruction. Yet in fact, the justly abused practice of writing Latin verses, prevails there as it does here. H. Taine in his amusing *M. Graindorge*, talks of the Latin verses written by his nephew, Anatole Durand. A graver work, an essay⁽⁷²⁾ on educational reform, discussing the practices of the École Normale, mentions that the students in their first year there, go over again their previous school work; "dissertations, Greek themes, *Latin* verses:" (no Greek Iambics however.)

The results of the whole system are thus described by M. Lisle, writing on suicide.⁽⁷³⁾

"What in fact is done in the schools? (collèges) The children are taught Greek and Latin: eight or nine of the best years of their life are sacrificed to this study. During these eight or nine years little is done to give them even very incomplete notions on the most useful sciences; such as mathematics, physics, chemistry. They are packed by hundreds in places always narrow, sometimes unwholesome; they are left to the care of insufficient or incapable masters, to the fire of their budding passions, to all the dangers of example, which too often develops among them detestable habits. . . . What matters it that their health languishes; that their body wastes through an unhappy inaction; that their heart is ruined, perhaps irrecoverably? Profound studies and the complete development require this, they say."

I cannot wonder that the generous Montalembert, the friend of Lamennais, should utter a warm eulogium on our English system as compared with the French. He saw the charming outside; and

felt as Mr. Bright did one summer afternoon at Oxford, when visiting one of the college gardens, he said: "I do not wonder that you decline to be reformed." M. de Montalembert says: ⁽⁷⁴⁾

"Nothing more useful for the development, moral and material, of these youths. It is difficult to conceive a situation better fitted to exert a happy and durable influence on the élite of the youths of a great nation, than that of Eton, for example. All round the college, vast meadows bounded by the meandering of the Thames, form a park adorned with lawns and woods as far as the eye can reach. It is not there alone that these boys take their amusements. They wander constantly over the country or through the neighbouring town; except during class hours, they do pretty much what they please, and seldom abuse this liberty which to us seems so amazing. Without superintendence, without any restrictions but those imposed by certain traditional customs and by that self-respect with which an Englishman is penetrated, they thus begin with an impetuous and precocious vigour an apprenticeship to public life, a *self-government*.

"Yet we do not see any roughness or coarseness, in these youths so early emancipated.

"The English student leaves a school like Eton, having already enjoyed the charm and responsibility of liberty; and finds at Oxford or Cambridge a discipline hardly less rigorous than that of his boyhood."

I fear that if M. Montalembert had penetrated the surface; that if he had read the evidence furnished to the Royal Commission; he would have a good deal modified his praises. However, with all the shortcomings and all the immoralities of our public schools, I far prefer them to the French barracks called Lycées or Collèges. Our youths grow up healthy, manly fellows, fine animals, with a good deal of honourable sentiment, and much external polish: a boy cooped up for years within four walls, and kept dawdling twelve hours a day over half heard lessons, is in great danger of becoming sickly, fretful, cowardly, and sneaking.

The French themselves are dissatisfied, and have for many years been making efforts to improve. About seven years ago, two gentlemen were appointed to collect information as to the English schools. Of these, Professor Motheré was singularly well qualified for his task by his perfect mastery of our language, which he had attained, as he explained to me, through the teaching of his mother, an Englishwoman. He performed his task with great care, and appears to have given a fair account of our schools,⁽⁷⁵⁾ though of course, not so complete a one as might now be written after studying the evidence and reports of our Commissions.

Since that time much has been written on this topic. The learned and original M. Renan has contributed his part. M. Gaston Boissier says in 1868 :⁽⁷⁶⁾

“It is beneficial for us to have our rest disturbed occasionally; and to be aroused from that thoughtless self-satisfaction into which we are apt to fall. . . . This service has been performed by M. Renan in his last work. . . . M. Renan has this singular merit, that in whatever he writes he is as useful to those who differ from him as to those who share his opinions. . . . I remember that his ideas greatly surprised many persons at first: but this astonishment has passed away, and most reflective persons are come round to him.

“The general notion at present, is that our imperfections have arisen from the original organization of our education. It may therefore be instructive to notice the vicissitudes of opinion as to events the nearest to us. Some years ago, M. Thiers in his history and in Parliament, lavished his praise on the imperial decree which founded the university, and many persons unreservedly shared his approbation of it. Just now there is a tendency to the opposite extreme, and to altogether blame the decrees of 1808 and 1811. Certainly the Emperor Napoleon I was utterly wrong in conferring an absolute monopoly on the university, which has since then paid dearly for the privilege: but shall we say that the state committed a mistake in itself undertaking to supply instruction, and in organ-

izing schools and lycées at its own cost? I think not, although such an opinion is commonly held."

The writer goes on to show what liberty of teaching means in France: he proves that it means abandoning education to the clergy.

"Let us suppose that the state suddenly shut up its schools and gave up the struggle; what would happen? It is useless to deceive ourselves: the change would profit the ecclesiastical teaching alone."

Then follow facts.⁽⁷⁷⁾

"M. Jourdain, in his interesting report on the progress of public instruction in France, shows that both as to primary and secondary instruction, the ecclesiastical establishments have become more and more numerous since 1850, and that they have profited by liberty more than others have. Lay establishments have actually diminished. 1850. Private schools, 16,736; of which 12,888 lay, and 3,848 religious. 1865. „ 16,349; „ 9,847 „ 6,502 „ showing a diminution of 3,041 lay and an increase of 2,654 religious.

Within the last two years, the Minister of Public Instruction has had another report from MM. J. Demogeot and H. Montucci, on middle-class education in England and Scotland. I am inclined to agree with an English critic, who, after discussing this document, says:⁽⁷⁸⁾ that though the French schools have excellences which we may overlook, yet our own schools have more merits than many of us admit. The report of the French Commissioners is partly at least an answer to recent disparagement of our own schools and high praise of continental schools. While we ought not to sit contented because two kindly foreigners find many things to envy, neither ought we to give way to a panic as though our schools were rotten.

There are not wanting indeed, Englishmen who

vaunt French schools as infinitely superior to ours : who shut their eyes to the folly and cruelty of confining boys in a barrack, and keeping them in close rooms ten or twelve hours a day ; and who would have us believe that the Lycée of Toulouse is a fair specimen of a hundred good and cheap French schools ; or that Lacordaire's establishment at Sorège, with its horses, and its shooting-gallery, is something more than an experiment made by an enthusiastic genius.

Some recent doings of French schoolboys, may teach us that in essential organization we are ahead of our old rivals. Everyone knows Miss Edgeworth's tale, *Barring Out* : few young people regard it as anything but a fancy sketch of something which might possibly happen : yet I clearly recollect that as a boy, I heard of the practice of barring out as having then lately prevailed at Rugby. It has disappeared from among us, and Tom Browne gives no hint of having heard of such a thing. I am told that it was threatened in the time of Dr. Wooll, the predecessor of Dr. Arnold ; but that Wooll was not a man to be bearded by beardless boys.

Yet in France, school rebellions seem to be common.⁽⁷⁹⁾ During one half of the year 1869-70, there were *nine* of them in the public lycées : viz. two in Paris, and one in each of these towns ; Douai, Lille, Brest, Nantes, Marseilles, Privas, Nevers. The causes were various : bad food, an unpopular head master, attempted deprivation of the week's holiday at Christmas, compulsion as to religion ; and, at Nevers, the expulsion of some subscribers to a Victor Noir monument. The boys

sing the Marseillaise, and with reference to bad beef shout "qu'un sang impur abreuve nos sillons." They smash desks and forms.

Behind these immediate occasions of outbreak, there must be more general causes.

"Unless it be admitted that French boys are less amenable to discipline than the schoolboys of any other country, the obvious inference to be drawn from their repeated fits of insubordination is either that their masters are unfit to manage them, or that the *lycées* themselves are such cheerless, uncomfortable places that no amount of kindness or good government on the part of the masters could succeed in making them tolerable. One has only to hear a French *lycéen* talk of his school and his masters to feel that there must be an admixture of both these causes lying at the root of most of the insurrections in the *lycées*. French boys despise their masters and hate their schools."

"As at present constituted, the French *lycée* system is best described in the words of M. Duruy, who one day boasted, in taking out his watch, that at the moment he was speaking every *lycéen* in France was reciting the same lesson. To have seen one (there are about 550 in France), is to have seen them all."

Corporal punishment is unlawful: that is, the cane and the birch are forbidden. But a custom prevails of putting boys for two or three days together on bread and water: a practice cruel and dangerous: cruel as inflicting the prolonged torture caused by requiring a boy to work when his frame is exhausted; dangerous as tending to ruin a boy's constitution.

Add the long hours, and the want of manly games to satisfy the restlessness and energy of boyhood, and you cannot wonder at insubordination, insurrection, and barring out.

We have still much to accomplish; but it is not by imitating the French that we shall arrive at a happy issue. Let our universities go on with their

reforms, and the middle-class schools will follow. Above all, let Parliament give us the provisions proposed in 1869 by Mr. Forster, appointing public examiners, to do for middle-class schools what is now done by the Privy Council examiners for the schools of the working-classes. If the public once know the exact condition of every form in every school, there will soon be an end of the follies and negligences of certain indolent masters, while the conscientious and able masters will reap their just reward.

NOTES.

- (1) Martha, *Les Moralistes*, 1866, 257.
- (1A) Confessions of St. Augustine, Book I, chap. 18.
- (2) Lord Colchester, *Diary*, 2, 394.
- (3) *Ib.*
- (4) Lord Palmerston, *Times*, 31 Mch., 1863.
- (5) *Pall Mall Gaz.*, 16 Dec., 1868.
- (6) *Dict. de l'Acad.*
- (7) A. Young, *Agric. Annals*, 21, 242.
- (8) *Soc. Science Review*, 1, 548.
- (9) Newman's *Apologia*, 72, 98, 104-5, 120, 132, 181, 192, 195, 278, 313, 329, 402.
- (10) Toulmin Smith's *Parly. Rememb.*, 211, 61.
- (10A) Mr. M. D. Hill, Q.C.
- (11) Charles Knight, 1, 55, 69.
- (12) *Œuvres de Napoléon III*, 2, 33.
- (12A) I am indebted for my Scotch information, to my able friend Mr. George Robertson, formerly Rector of the Royal Academy, Inverness, and now Head Master of the Birmingham and Edgbaston Proprietary School.
- (13) Lord Colchester, *Diary*, 2, 308.
- (14) Mill, *Dissertations*, 2, 69, *note*.
- (15) A. Young, *Agric. Annals*, 238.
- (16) *Edinb. Rev.*, Jany., 1836, 411.
- (17) *Ib.*, 409.
- (18) *Ib.*, 443.
- (19) Gibbon's *Decline and Fall*, 1818, 1, 5.
- (20) *Edinb. Rev.*, Jany., 1836, 421.
- (21) *Ib.*, 420.
- (22) *Pall Mall Gaz.*, 21 and 27 Sept., 1869.
- (23) *Ib.*
- (24) *Statistical Journal*, 32, 325.
- (25) Filangieri, *French Edn.*, 1840, 2, 204.
- (26) *Fortnightly Review*, 1865, 482-3.
- (27) *Dublin Review*, Jany., 1867.
- (28) *Saturday Review*, 18 April, 1863, 504.
- (29) *Pall Mall Gaz.*, 20 May, 1868, 9.
- (30) *Ib.*, 2 March, 1869, 10.

- (31) Evelyn, Diary, 1, 341.
- (32) "But let not each gay turn your wonder move,
For fools *admire*, but men of sense approve."—POPE.
- (33) Quetelet, Sur l'Homme, 1, 224.
- (34) Lewes, Goethe, Ed. 1855, 1, 25.
- (35) Bentham, Works, Part 19, 7.
- (36) Fox, Correspondence, pp. 5 and 11.
- (37) Havet's Pascal, 1, lxiii.
- (38) Ib., lxiv.
- (39) Pall Mall Gaz., 26 Mch., 1866.
- (40) Dict. de l'Écon. Polit., II, 485, 2.
- (41) Bohn's Sheridan, 1848, 9.
- (42) Dr. Edward Smith, Practical Dietary, 1864, 187.
- (43) Pall Mall Gaz., 3 Oct., 1868, 4.
- (44) Ib., 17 Apl. and 17 Aug., 1868.
- (45) Socl. Sc. Review, 1865, 529.
- (46) Dauban, Mad. Roland, xv.
- (46A) Robert Owen and His Soc. Philos., 5.
- (47) Arthur Hill, Hints on Discipline, 1865, 11.
- (47A) Merch. of Venice, IV., 1.
- (48) Pall Mall Gaz., 19 Dec., 1868.
- (49) Westminster Rev., 10, 244.
- (50) Carlyle's Sterling, 45-6.
- (51) Gibbon, Decline and Fall, 1818, 4.
- (52) Wealth of Nations, B.V., C. 1: Ed. 1839, 350.
- (53) Dict. de l'Écon. Pol., 1, 936.
- (54) Spectator, 1990, 921, 1.
- (55) Politique Positive, 1, 171.
- (56) Westminster Rev., 8, 177, *note*.
- (56A) Mr. George Robertson, mentioned in note ^{12A}.
- (57) Dict. de l'Écon. Pol., 1, 942, 1.
- (58) M. Arnold, Cornhill Mag., Feby, 1866, 164.
- (59) Bishop Wilson's Life, 1860.
- (59A) Nottelle, Mélanges Littéraires, 56.
- (60) Rev. d. d. Mondes, 85, 956.
- (61) M. Lagowski, in A. Young Agric. Annals, 8, 385.
- (62) Ib., 10, 375.
- (63) Rev. d. d. Mondes, 80, 123.
- (64) Ib., 124.
- (65) Cornhill, Feb., 1866, 164.
- (66) Pall Mall Gaz., 26 Nov., 1868, 10.
- (67) Rev. d. d. Mondes, 83, 430.
- (67A) Pall Mall Gaz., 23 Oct., 1869, 4.
- (68) Ib., 9 Feby., 1870.

- (69) *Ib.*, 5 May, 1868.
- (70) *The Academy*, 9 Oct., 1869, 15.
- (71) *Rev. d. d. Mondes*, 75, 869.
- (72) *Ib.*, 75, 877.
- (73) *Lisle, Suicide*, 1856, 83.
- (74) *Nottelle, Mélanges Littéraires*, 65.
- (75) *De l'Enseignement en Angleterre*, 1864. French Blue Book.
- (76) *Rev. d. d. Mondes*, 75, 865.
- (77) *Ib.*, 867, *note*.
- (78) *Pall Mall Gaz.*, 17 Apl., 1869, 12.
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Essay IV.

ADAM SMITH AND HIS PRECURSORS.

I.

Estimate of
greatness
difficult.

IT is extremely difficult to estimate the greatness of Adam Smith as a Political Economist. His *Inquiry into the Wealth of Nations* has been so widely read, and his conclusions have been so much adopted into the stock philosophy of Europe, that it would require express reading, careful study, and great effort, to sum up the knowledge and wisdom we owe to him. On the other hand, eulogists are so much addicted to copying from each other, that it is unsafe to trust the usual praises of Smith's originality and boldness and sagacity.

English
opinions.
Mackintosh
—Rae.

Few men of the present century read more authors than Sir James Mackintosh; and few men read with more discernment. He says, *The Treatise on the Law of War and Peace*,⁽¹⁾ *The Essay on the Human Understanding*, *The Spirit of Laws*, and *The Inquiry*

into the *Causes of the Wealth of Nations*, are the works which have the most directly influenced the general opinion of Europe during the last two centuries. They are also the most conspicuous landmarks in the progress of the sciences to which they relate." Mackintosh also calls him "the most eloquent of modern moralists."⁽²⁾ Mr. Rae, in a work which controverts many of the received conclusions of Political Economy, says of the abandonment of protectionist doctrines :

"This revolution in the opinions of men, had its rise in France. It might have died there, however, with the sect from which it had birth, had not a man of surprising genius, placing himself at the head of the feeble party then supporting it, enabled them to give their principles currency throughout the nations of Europe. Adam Smith will be recorded among remote generations, as one having powerfully influenced the opinions and policy of the civilized world, during the eighteenth and nineteenth centuries. His great work no sooner appeared in Britain than it was read, and the opinions it maintained adopted, by every one who pretended to any knowledge of the important subjects of which it treated. It quickly, and with like success, spread through other lands. Never was the force which mere intellect possesses more strikingly manifested."⁽³⁾

In such a case it is useful to appeal to a Court of foreign judges. What say the continental writers? We know that they will at any rate, be free from an undue tendency to praise. We find that as to other great Englishmen they dispute the accuracy of our estimates. They contend that in our worship of Bacon we overlook the greatness of Descartes : that in our worship of Newton we forget the vast genius of Leibnitz. The devotee of Smith may ask with alarm whether they dispute his undivided sovereignty, and would share it with the *Physiocrates* of Louis XV.

Foreign
opinions.

Dumont.

Dumont, the interpreter of Bentham, speaks of A. Smith as "the true founder of Political Economy:" he says that "having to treat a new topic, with a controversy at every step, he felt it necessary to begin with facts. His work is mostly historical. He describes admirably the progress of society from its primitive penury to its present riches: he traces the march of industry in its natural course, from agriculture to manufactures, from manufactures to trade, from home trade to foreign commerce."

*Dict. de
l'Économie
Politique.*

This passage was written half a century ago. In a recent work, the *Dictionnaire de l'Économie Politique* (1854) we find:

"Smith (Adam). Ce nom est le plus grand de l'Économie Politique. Il a eu cette singulière fortune de marquer son empreinte d'une manière ineffaçable dans le monde intellectuel et dans celui des faits. Adam Smith est non-seulement le fondateur avéré des véritables doctrines économiques, mais encore l'autorité hautement invoquée qui inspira Huskisson et Robert Peel, les ministres intrépides de ses idées."

Smith's disciples may be well content with these praises, which are not qualified as they probably might have been, by dwelling on the facts that the learned physician Quesnay, the trader Gournay, the intrepid minister Turgot, had in some degree anticipated the free-trade conclusions of the *Wealth of Nations*; and that Descartes like earlier philosophers, had shown the value of the *Division of Labours*. The eulogies are as frank as, no doubt, they are well founded.

II.

THE circumstances of Smith's life are well known; and it is a curious inquiry, by which of them he was led to the trains of thought which issued in his great work. A careless application of facts might give this explanation: Smith's father was a Comptroller of Customs at Kirkcaldy near Edinburgh, and the boy's attention would naturally be directed to questions of trade: Smith himself was afterwards a Commissioner of Customs for Scotland, and his duties would make him further acquainted with fiscal affairs. The real facts contradict these conjectures: for the father died *before* Smith's birth; and the Commissionership was conferred two years *after* the publication of the *Wealth of Nations*.

What led
Smith to
Pol. Ecy.?

This work seems in fact to have grown up naturally; as a part of the course of lectures he delivered at Glasgow, when he succeeded to that chair of moral philosophy from which Hutcheson had instructed his boyhood. Smith's course was divided into four heads; of which Natural Theology and Ethics were the two first: the third was Jurisprudence; and the fourth inquired into the policy of those regulations which aim at promoting the riches, power, and prosperity of the state.

Grew out of
his course
of lectures.

It is possible that he may have felt greater interest in fiscal questions from the remembrance of his father's vocation, and from his long residence at Kirkcaldy with his beloved mother. Whether his duties as Commissioner caused any improvements in

Residence at
Glasgow.

his later editions, could be determined by collating the first with the last: but it has always been a matter of surprise to me, as far as I have compared them, to find how little difference there is between the first quarto and the last edition of all. There can be no doubt however, that Glasgow during his residence there furnished him with many materials, and by its increasing commerce and consequent prosperity supplied much material for thought.

Glasgow
Club.

It appears too, that Smith was directly indebted for much of his mercantile information, the abundance of which has often surprised me, to⁽⁴⁾ “a weekly club of which a Provost Cochrane was the founder and a leading member, in which the express design was to inquire into the nature and principles of trade in all its branches, and to communicate their knowledge and views on that subject to each other.” Glasgow was at that time only struggling into importance, and possessed little opulence and outside the university no refinement nor high education. There was no teacher of French or of music in the town: the young ladies had ungainly manners, with nothing but good looks and fine clothes to recommend them. But Provost Cochrane was distinguished from his townsmen by his accurate and extensive knowledge, his agreeable manners, and his colloquial eloquence. Smith, says Carlyle, acknowledged his obligations to this gentleman.

Residence in
France.

In 1764-5 Smith resigned his Glasgow professorship, and went to France with the young Duke of Buccleuch. It appears to me that this change must have promoted the scheme of his great work. Dugald Stewart indeed, speaks of it in a different

tone. He says⁽⁵⁾ “ With the connexion he was led to form in consequence of this change in his situation, he had reason to be satisfied in an uncommon degree, and he always spoke of it with pleasure and gratitude. To the public *it was not perhaps a change equally fortunate*; as it interrupted that studious leisure for which nature seems to have destined him, and in which alone he could have hoped to accomplish those literary projects which had flattered the ambition of his youthful genius.” Mr. Stewart seems to me to have written like a professor, and not like a judge of men: like one intent on colleges and authorship, not like one familiar with worldly affairs. Adam Smith, having to treat of the production and distribution of the means of living; of agriculture, manufactures, and commerce; and being naturally a shy and recluse man; was in danger above all things of trusting too much to reading and imagination for his facts and for his estimate of men’s motives. His residence in the trading town of Glasgow, and his intimacy with Provost Cochrane’s Club, partly corrected this tendency. What better could have happened after this, than that Smith should go abroad to see another nation, at that time far superior to the English in population and in refinement? A residence of a year and a half at Toulouse must have furnished his mind with a vast stock of knowledge, and with materials for comparison of the highest value. Toulouse also, had recently been the scene of the Calas Tragedy, which had excited pity and terror by the bigoted and barbarous cruelty of legal murder; and of which Voltaire said that during the years he was pursuing

the actors he never allowed himself a single smile. The breadth and liberality of Smith's views must have been greatly promoted by this residence. In these two or three years if he had remained at home he might perhaps have elaborated the work which he meditated on Politics.⁽⁶⁾ But interesting as that work might have been, the world could dispense with it without any serious retardation of its progress: whereas any addition to the materials for the *Wealth of Nations*, any correction of an error that might have deformed it, was a gain to the human race.

Paris
Society.

His Parisian experience too must have given an impulse to his work. He lived with Quesnay and Turgot, the *Économistes*, or *Physiocrates*; with D'Alembert, Helvétius, and other "Philosophers." Talking little, and listening much to these audacious thinkers, he must have received an impulse towards his work, which a college seclusion would have failed to give. His intercourse with such men, on the brink of a revolution, was an experience which may be well sighed for by those familiar only with the tameness of secured freedom and prosperous industry. Parisian society too was at this time agitated by a lively controversy, between the *Physiocrates* and the ancient party, as to the mercantile system and the doctrine of free-trade: the lively French discussions, must have greatly aided in forming the Scotch philosopher's clear and complete opinions on those important topics.

Conclusion
as to the
causes.

I conclude therefore, that Adam Smith was not led to his great work, either by early familiarity with his father's vocation, or by his own duties as

Commissioner of Customs: but that his lectures at Glasgow, enriched by Provost Cochrane's Club, gradually assumed the form with which we are familiar in the *Wealth of Nations*; and that his residence in France, first at Toulouse, and then in Paris, supplied a familiar knowledge of the greatest European nation, gave a liberality of mind not to be obtained by an academical career or by the reading of books, and directed a questioning and revolutionary temper, to the investigation of commercial and financial topics. Without the Glasgow professorship the seed of the *Inquiry* might not have been sown; without Provost Cochrane's Club it might have failed to germinate; without the French experience, it might have issued in a comparatively narrow and tame disquisition.

III.

ADAM SMITH acquired during his lifetime a very high reputation. At the early age of 25, he began a course of lectures in Edinburgh, on rhetoric and light literature. These were so well attended that he repeated them during each of the following years: and he had among his auditors such young men as Wedderburn and Blair.

Success
during
lifetime.
Lectures
1748.

He was only 28 when he was elected Professor of Logic at Glasgow; and at 29 he was advanced to the chair of Moral Philosophy. It appears that he was remarkably successful as a lecturer: his manner was correct, and he was able to trust to his power of extempore discourse; which, we may be sure,

Professor at
Glasgow.

did not in his case degenerate into thin repetitions and platitudes.

"His reputation as a professor was accordingly raised very high, and a multitude of students from a great distance resorted to the University merely upon his account. Those branches of science which he taught became fashionable at this place, and his opinions were the chief topics of discussion in clubs and literary societies. Even the small peculiarities in his pronunciation or manner of speaking became frequently the objects of imitation."⁽⁷⁾

But the *Inquiry into the Wealth of Nations* was not universally well received. Boswell thought the book dull and unreadable. Smith's friend, Dr. A. Carlyle,⁽⁸⁾ said, that the book got him the credit of being an "inventive genius of the first order," but was "tedious and full of repetition." "His separate essays in the second volume have the air of being occasional pamphlets, without much force or determination."

The most amusing censure however, is that of Mr. Disraeli in his *Curiosities of Literature*.⁽⁹⁾ "Adam Smith is not only indignant at 'Sumptuary Laws,' but asserts, with a democratic insolence of style, that 'it is the highest impertinence and presumption in kings and ministers to pretend to watch over the economy of private people, and to restrain their expense by sumptuary laws. They are themselves always the greatest spendthrifts in the society; let them look well after their own expense, and they may safely trust private people with theirs. If their own extravagance does not ruin the state, that of their subjects never will.'" I have not elsewhere seen Smith accused of democratic insolence.

If the accusation were just, it is singular that William Pitt should have been one of his admirers;

Contem-
porary
success of
the *Wealth*
of *Nations*.

D'Israeli.

Pitt's
eulogium.

and that, even after the French revolution had changed his hereditary liberalism into a profession of toryism, we find Smith dining at Pitt's house,⁽¹⁰⁾ and afterwards expressing his admiration of the minister's abilities. The French Treaty was altogether in accordance with Smith's opinions. In 1791-2, long after Pitt had abandoned democratic opinions, we find him speaking of Smith as "an author now unhappily no more ; whose extensive knowledge of detail and depth of philosophical research will, I believe, furnish the best solution to every question connected with the history of commerce, or with the systems of political economy."⁽¹¹⁾

Arthur Young quoted⁽¹²⁾ from Woodfall's Diary, a report of the same speech, but with considerable variation, and for a particular purpose. Pitt was made to say that the preëminence of our commerce and manufactures was caused by the increase of our capital : and that this subject was never properly understood till men became acquainted with the writings of Dr. Adam Smith, now unfortunately no more ; a man whose depth of research, power of reasoning, and extensive knowledge, had long made him the object of his veneration.

A. Young's
version.

Young's comments on the speech are characteristic. He says that after hearing great commendations of it, he read it with equal attention and disgust. He was shocked to find the greatest, dearest, and most important interests of the kingdom, totally and contemptuously overlooked, as of no sort of consequence. "Who, that reads this *coup d'œil* of British resources, can suppose that AGRICULTURE is of more importance in the minister's

Young's
comments.

eyes than the trade of shoe-blackening? He once deigns (very much in the stile of a French marquis under the old government) to speak of the industry of the peasant; from this we are allowed to suppose that *England* is LAND; and that cultivation is wealth." This speech, he says, "is a tissue of the common-places of a countinghouse, spun for a spouting-club, by the clerk of a banker."

Young on
A. Smith
himself.

Young had at this time the discontented and railing spirit of a Cobbett; though he soon afterwards unlearned his democracy, when the liberals generally, disgusted with the brutalities of Paris, rallied to the farmer king and his ministers; and when his own appointment as Secretary to the Royal Agricultural Society, gave him a satisfactory position in the world. In the article I have quoted, he distinguishes between Pitt and his instructor. Are these, he asks, the lessons Pitt learned from Adam Smith? from a writer who attributes the flourishing situation of England more to the security of farmers in their leases, than to all our boasted laws for the encouragement of foreign commerce?

Young's
previous
censures.

Eight years before this⁽¹³⁾ indeed, Young had again indulged in censures of the philosopher. He had said of him that he "never touches on any branch of rural economy, but to start positions that arise from misstated facts, or lead to false conclusions." But Young, though an unequalled observer of facts in England, Ireland, and France; and though as much esteemed in that character by DeTocqueville and other Frenchmen, as by his own countrymen, was always a rash thinker and a careless periodical writer, who set down impulsively the first thoughts of his brain.

To the testimony of a great contemporary statesman, I may add the testimony of an equally great contemporary thinker. Jeremy Bentham was not addicted to eulogium; but he departed from his ordinary satirical vein when speaking of Adam Smith. In his *Defence of Usury*, written in 1787,* three years before Smith's death, he addressed him thus.

J. Bentham.

"I forget what son of controversy it was among the Greeks, who having put himself to school to a professor of eminence, to learn what, in those days, went by the name of wisdom, chose an attack upon his master for the first public specimen of his proficiency. This specimen, whatever entertainment it might have afforded to the audience, afforded, it may be supposed, no great satisfaction to the master: for the thesis was, that the pupil owed him nothing for his pains. For my part, being about to show myself in one respect as ungrateful as the Greek, it may be a matter of prudence for me to look out for something like candour, by way of covering to my ingratitude: instead, therefore, of pretending to owe you nothing, I shall begin with acknowledging that, as far as your track coincides with mine, I should come much nearer to the truth were I to say I owed you everything. Should it be my fortune to gain any advantage over you, it must be with weapons which you have taught me to wield, and which you yourself have furnished me; for, as all the great standards of truth which can be appealed to in this line, owe, as far as I can understand, their establishment to you, I can see scarce any other way of convicting you of any error or oversight, than by judging you out of your own mouth."†

With such a eulogium from Pitt, who was little accustomed to bestow any consideration on literary

Conclusion
as to con-
temporary
success

* Bentham was nearly 40 years old at this time.

† Bentham's Works, 9, 20, Letter 13. In the collected works of Bentham, (Tait, 1838, &c.) it is stated (Part ix, Title Page) that the *Defence of Usury* was "originally printed in 1816." In another volume of the same edition (Part xix, pa. 176, col. 2) it is stated that the MS. of the *Defence of Usury*, written in Russia, and sent home, fell into the hands of Bentham's father, and that he sent it to the press. "On Bentham's return from Russia, when passing through the Hague in 1788, Sir James Harris put the volume into his hand." Adam Smith read the book as also did Dr. Reid in 1788.

men, whether gay or grave; and with such another eulogium from Bentham, who seldom gave unmeasured praise to any one; A. Smith could afford to treat with indifference the trifling censures of Boswell and Carlyle, the vacillating estimates of Arthur Young, and the heavy censure of Disraeli. The *Wealth of Nations* was not one of the neglected works of genius: nor was it the unhappy fate of its author to have to appeal from the indifference of his own generation to the judgment of posterity. Adam Smith was not required, like his affectionate intimate David Hume, to wait twenty tedious years in obscurity.

IV.

Moral
Character-
istics.

ADAM SMITH'S characteristics as a private man are well known. In many respects he resembled David Hume; though he lacked that singular simplicity, that boyishness of character, which made the great sceptic the most welcome of guests, even among the grave Presbyterians of Edinburgh. Like Hume, he gave largely but secretly: he was tenderly attached to his mother: the loss of her and of his cousin Miss Douglas who kept her house, are supposed to have preyed on his spirits and to have hastened his death. Like Hume too, he died unmarried, nor have I seen any mention of an attachment on his part, besides the platonic one to his cousin.

Taste and
Temper.

In Smith's writings there is far more acrimony than in Hume's. Smith wonders at the depravity

of the world; Hume is incapable of wonder: Smith therefore, declaims against vice; Hume doubts where virtue ends and vice begins. According to Stewart and Carlyle,⁽¹⁴⁾ neither had any faculty of discriminating character. "David Hume, like Smith, had no discernment at all of characters. The only two clergymen whose interests he espoused, and for one of whom he provided, were the two silliest fellows in the church." Smith "knew nothing of characters, and was ready to draw them on the slightest invitation. But when you checked him or doubted, he retracted with the utmost ease, and contradicted all he had been saying." Smith shared also with his friend a low estimate of Shakspeare. Carlyle,⁽¹⁵⁾ speaking of the distinguished Edinburgh circle, of John Home, Ferguson, Robertson, Smith, and Hume, says:—"With respect to taste, we held David Hume and Adam Smith inferior to the rest, for they were both prejudiced in favour of the French tragedies, and did not sufficiently appreciate Shakspeare and Milton. Their taste was a rational act, rather than the instantaneous effect of fine feeling."

Adam Smith did not shine in society: not even in that of his particular friends. That he should be silent in Paris, in his intercourse with the great thinkers of the pre-revolutionary period, was inevitable; because, like other highly educated Englishmen, while familiar with the written language, he spoke French with hesitation. We all remember the picture of David Hume, sitting on a couch between two lively Parisiennes, and contenting himself with a smiling *oui* in reply to their sallies.

But even in his own language Smith's conversation

In Society.

Conversation
in Scotland.

did not flow with freedom. He might have said of himself, that like Dr. Samuel Johnson, he resembled a ghost, in never speaking until he was spoken to.⁽¹⁶⁾ He was unobservant of what was going on: in his remarkable absence of mind his lips moved, and even his smiles and gestures showed him to be in cloudland. Though he was eminently successful as a lecturer, he was like some other professors unable to speak before his equals in age. At the first meeting of the "Select Society," he undertook to explain the design of the meeting; but in doing this his voice sounded harsh, his enunciation was imperfect, and he almost stammered. Instead of boys, there were bearded men before him; and perhaps he started at "the shadow of his own reputation." His private talk was more fluent, was ingenious and philosophical; but he harangued rather than conversed; and so bad a listener wanted one of the requisites of an agreeable companion. When the young Duke of Buccleuch brought his wife to Dalkeith, Adam Smith appeared at table as their mentor; but he succeeded ill in introducing his Scotch friends to his old pupil: "he was ill qualified to promote the jollity of a birthday: the fare was sumptuous, but the company was formal and dull."

Conversation
in London.

The sketch of Smith's conversational weakness in Scotland, is supplied by his admiring friends: his appearance in London is known to us from Boswell, who was incapable of appreciating his greatness; and who judged him by a comparison with that demigod of his imagination, who was as inferior to Smith in philosophical genius, as he

surpassed him in ready wit and caustic repartee. Boswell relates,⁽¹⁷⁾ under the year 1780, that Johnson having recited some verses by Dr. Bentley, Adam Smith "observed in his decisive professorial manner, *very well, very well:*" and that Johnson then said, "Yes, they *are* very well, Sir, but you may observe in what manner they are well. They are the forcible verses of a man of a strong mind, but not accustomed to write verse; for there is some uncouthness in the expression."

Upon this Boswell remarks, "The difference between Johnson and Smith is apparent even in this slight instance. Smith was a man of extraordinary application; and had his mind crowded with all manner of subjects; but the force, acuteness, and vivacity of Johnson were not to be found there. He had book-making so much in his thoughts, and was so chary of what might be turned to account in that way, that he once said to Sir Joshua Reynolds, that he made it a rule when in company, never to talk of what he understood. Beauclerk had for a short time a pretty high opinion of Smith's conversation. Garrick after listening to him for a while, as to one of whom his expectations had been raised, turned slyly to a friend, and whispered him, 'What say you to this—eh? *flabby*, I think.'" What would Boswell have said of the silent Addison? No doubt, that he wanted "the force, acuteness, and vivacity" of Johnson. Yet Addison and Smith are classics, and Johnson but for his dictionary and the genius of his literary parasite, would be forgotten.

Boswell's
comparison
A. S. and
Johnson.

It is well known that Johnson and Adam Smith

Intercourse
of A. S. and
Johnson.

had once a short but violent quarrel: it has not been noticed that there was disagreement between them at other times. They met in London at Johnson's Club and elsewhere, and Boswell relates⁽¹⁸⁾ the following conversation between himself and Dr. Robertson.

"ROBERTSON: Dr. Johnson and I have always been very gracious; the first time I met him was one evening at Strahan's, when he had just had an unlucky altercation with Adam Smith, to whom he had been so rough, that Strahan, after Smith was gone, had remonstrated with him, and told him that I was coming soon, and that he was uneasy to think that he might behave in the same manner to me. 'No, no, Sir, (said Johnson) I warrant you Robertson and I shall do very well.' Accordingly he was gentle and good-humoured, and courteous with me the whole evening; and he has been so upon every occasion that we have met since. I have often said (laughing) that I have been indebted in a great measure to Smith for my good reception."

The other and more violent altercation was not related by Boswell; but Mr. Croker obtained an account of it from Sir Walter Scott.⁽¹⁹⁾

"Mr. Boswell has chosen to omit, for reasons which will be presently obvious, that Johnson and Adam Smith met at Glasgow; but I have been assured by Professor John Millar that they did so, and that Smith, leaving the party in which he had met Johnson, happened to come to another company where Millar was. Knowing that Smith had been in Johnson's society, they were anxious to know what had passed, and the more so as Dr. Smith's temper seemed much ruffled. At first Smith would only answer, 'He's a brute—he's a brute;' but on closer examination, it appeared that Johnson no sooner saw Smith than he attacked him for some point of his famous letter on the death of Hume. Smith vindicated the truth of his statement. 'What did Johnson say?' was the universal inquiry. 'Why, he said,' replied Smith, with the deepest impression of resentment, 'he said, *you lie!*' 'And what did you reply?' 'I said, you are a son of a —.' On such terms did these two great moralists meet and part, and such was the classical dialogue between two great teachers of philosophy."

I do not wonder at Boswell's failing to record the brutal spleen of his hero.

V.

MR. BUCKLE, as the historian of civilization, is probably the most suggestive of recent authors; though from the extent of his plan, and the labour it involved, perhaps also from the constitution of his mind, there resulted a certain hastiness of generalization, and an occasional rashness of opinion, quite inconsistent with that cautious scepticism which above all other things he recommended to a philosopher. His Chapters "on the Scotch Intellect" are well known. He says of Adam Smith,⁽²⁰⁾ "who in 1759, published his *Theory of Moral Sentiments*, and, in 1776, his *Wealth of Nations*," that "To understand the philosophy of this, *by far the greatest of all the Scotch thinkers*, both works must be taken together, and considered one; since they are, in reality, the two divisions of a single subject. In the *Moral Sentiments*, he investigates the sympathetic part of human nature; in the *Wealth of Nations*, he investigates its selfish* part."

Buckle's
estimate of
A. S.

Mr. Buckle in his first volume,⁽²¹⁾ stated that "In the year 1776, Adam Smith published his *Wealth of Nations*: which, looking at its ultimate results, is probably the most important book that has ever been written, and is certainly the most valuable contribution ever made by a single man towards establishing the principles on which government should be based." And after a fuller consideration

B.'s
eulogium.

* Bentham would say its self-regarding part, since selfish is not intended here to be used dyslogistically.

of the Scottish writers he pronounced the verdict I have already quoted, besides repeating in another place,⁽²²⁾ “The *Wealth of Nations* is probably the most important book which has ever been written.”

Inductive
and
deductive
reasoning.

In an examination of the Scottish intellect, Mr. Buckle⁽²³⁾ compares it with that of England and that of France. He says that in England, from the death of Bacon till the present century, the inductive method of reasoning prevailed; and that in France there was the same prevalence from the last century till the present. He goes on to say as to the two fundamental methods; that in Scotland during the last century, all the great thinkers belonged to the deductive school: “and that, in the very few instances of induction which their works contain, it is evident, from the steps they subsequently took, that they regarded such inductions as unimportant in themselves, and as only valuable in so far as they supplied the premisses for another and deductive investigation.”

That A. S.
deductive.

He makes no exception for Adam Smith; but states that in the attempt to perform his prodigious task of raising the study of human nature to a science, by exhibiting both the sympathetic and the selfish (self-regarding) motives to action; the one class of motives in the *Moral Sentiments*, the other in the *Wealth of Nations*; “he soon perceived that an inductive investigation was impossible, because it would require the labour of many lives even to assemble the materials from which the generalization was to be made.”

Distinction
induction
and
deduction.

Mr. Buckle⁽²⁴⁾ calls upon the reader to find, and seize firmly, the distinction between induction and

deduction. He goes on to state the distinction. I am of opinion that after going through his statement, an ordinary reader would be puzzled by the description given in place of the definition which he expects: and by the abundant use of "abstract and concrete," "particulars and generals," and "reasoning from principles," compared with "reasoning to principles."

If we turn to Archbishop Whateley's *Logic*,⁽²⁵⁾ we shall know at any rate what the author meant. We there see that there are two processes both called induction. The one is the collection of facts: as that the earth moves round the sun in an elliptical orbit; that Venus and Mars do the same. It is in this sense, I think, that when a multitude of facts are collected and co-ordinated, we speak of a *wide* induction. The other process is the drawing an inference from these facts. We find that these planets, and all the planets we know, move in elliptical orbits: we infer that all planets whatsoever do the same. This inference is the second process: it is an induction from facts: a reasoning *from* induction, not a reasoning *by* induction. The one process is the collecting of facts; the other is the drawing an inference from the facts.

Godwin and other supporters of the *Perfectibility of Man*, seem to me to furnish a striking example of the deductive method. God is omnipotent and good: therefore He must will the happiness of His creatures: therefore grief, sickness, death, cannot be according to His will: therefore these evils may be banished; and man may attain a condition on this earth, of freedom from grief and sickness, and

Whateley's
Logic.

Example
from
Godwin's
school.

may live in this happiness for millions of years. The inductive inquirer, without troubling himself much about the accuracy of this reasoning, sets about finding all the facts bearing on the question at issue. He recollects that secular history fails to record the fact of any man having attained the age of 200 years : he ascertains that among the healthiest class of the healthiest nation even of the temperate zone, no such longevity is known ; and he learns that all the resources of sanitary art, *though they have greatly lessened the deaths of infants, have added but a small percentage to the lives of adults.* He sees that the same law of death prevails among all known organized beings : among plants and among the lower animals. He finds that growth, cessation of growth, and decay, everywhere succeed each other : he is told by men of science that the actual changes of the human frame, must put an end to life though no disease should supervene. From the consideration of all these facts he infers that the human race is condemned to die : he is tolerably certain that the argumentation which proves the contrary, is fallacious. He has gone through two processes : the collection of facts, and the reasoning from the facts. Mr. Buckle says aright that “The inductive philosopher is naturally cautious, patient, and somewhat creeping ; while the deductive philosopher is more remarkable for boldness, dexterity, and often rashness.”

Adam Smith
Wealth of
Nations, and
Ricardo.

By which method is the *Wealth of Nations* constructed ? We may answer this question better if we look at the work of another distinguished writer. Ricardo in his *Political Economy*, deals especially

with the Theory of Rent, as the foundation of his system. He assumes as manifestly true, that men will begin by cultivating the best land: that when this is all occupied, the next best will be taken in: that land of the third, fourth, and other inferior qualities will be cultivated when each of the higher qualities is all occupied. I am not about to dispute this statement: I adduce it only as an illustration.

If Ricardo had pursued the inductive method, he would not have been satisfied with stating this as a manifest truth: but would have treated it as an hypothesis; and would have gone about the world, inquiring whether this sequence of events really had happened. Not having done so, he left himself open to attack by any one who found facts at variance with his system. The Rev. Richard Jones has left lectures in which he thus tries the theory by facts, and concludes that at the most the theory is true only of a corner of the world. The American writer, Mr. Carey, has gone further; and after searching the history of nations, is convinced that Ricardo's fundamental statement as to the best land being first occupied, is contrary to truth. This is the fate to which the deductive reasoner is exposed.

Ricardo not inductive.

Malthus, in the remarkable work which has made his theory proverbial, pursued a different course from Ricardo's. In the first instance, in 1798, he published a mere *Essay on the Principle of Population*, and living in the country he had few materials within his reach. But during the next five years he made wider inquiries; and a glance

Malthus' *Population*.

at the contents of his later editions will show that he collected facts from every corner of the world.

I find that in the sixth edition, after stating the principles of the subject, he goes on to inquire as to the facts among the American Indians, the South Sea Islanders, the ancient inhabitants of Northern Europe, the modern Pastoral Nations, the African Tribes, the Siberians, the Turks, the Hindoos, the Chinese, and the ancient Greeks and Romans. In a second book he considers the Norwegians, the Swedes, the Russians, the inhabitants of central Europe, the Swiss, the French, the English, Scotch, and Irish. Having satisfied himself of the facts, he discusses, in his second volume, the systems of Condorcet and Godwin, and explains the probable effects of Emigration, Poor Laws, and Corn Laws, and investigates certain doctrines of Political Economy. He does what Ricardo omits to do: he treats his obvious truth as an hypothesis, and before deducing consequences from it, proves by a wide induction from facts, that the hypothesis is well founded.

Apply to
Adam Smith.

Division of
Labours.

We may now be able to determine whether Adam Smith's course was that of Ricardo, or that of Malthus: whether in his *Wealth of Nations* he was "cautious, patient, and somewhat creeping," or whether he was "remarkable for boldness, dexterity, and often rashness." It will be remembered that the work opens with a chapter on the *Division of Labours*.⁽²⁶⁾ A deductive reasoner would have contented himself with the notorious fact, that division of labours promotes productiveness: he would at once have investigated the laws of this

practice, and drawn such inferences as pleased him. Adam Smith on the contrary, took great pains to learn the actual facts: he fixed on pin-making as his type; himself inspected the process, and counted the pins made.

"I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently, performed two or three distinct operations. But though they were very poor, and therefore, but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about 12lbs. of pins in a day. There are in a pound upwards of 4,000 of a middling size. These ten persons therefore, could make among them upwards of 48,000 pins in a day. (or 4,800 each person) But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly would not each of them have made 20, perhaps not one pin in a day; that is, certainly, not the 240th, perhaps not the 4,800th part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations."

Afterwards, Smith goes on to inquire how it is that so great an increase of productiveness is accomplished. He does not appeal to the laws of human nature, to his own consciousness, or to notorious facts. He states that he has studied the matter in a smith's forge, and has observed how it is that if a smith tries to make nails, he is beaten in the race by a mere boy brought up as a nail maker. In this chapter, Smith elaborately, and to the utmost of his power appeals to facts. A strange proceeding for a deductive reasoner!

Laws of
Division of
Labours.

On the subject of rent, Adam Smith likewise appeals to facts.⁽²⁷⁾ He begins with the theorem that rent is not merely a profit paid on capital laid out by the landlord on improving the land or on buildings. He gives two examples of a payment of rent, where no outlay of capital has taken place.

Laws of
Rent.

"1. Kelp is a species of seaweed, which, when burnt, yields an alkaline salt, useful for making glass, soap, and several other purposes. It grows in several parts of Great Britain, particularly in Scotland, upon such rocks only as lie within the high water mark, which are twice every day covered with the sea, and of which the produce, therefore, was never augmented by human industry. The landlord, however, whose estate is bounded by a kelp shore of this kind, demands a rent for it as much as for his corn fields. 2. The sea in the neighbourhood of the islands of Shetland is more than commonly abundant in fish, which make a great part of the subsistence of their inhabitants. But in order to profit by the produce of the water, they must have a habitation upon the neighbouring land. The rent of the landlord is in proportion, not to what the farmer can make by the land, but to what he can make both by the land and by the water."

A deductive reasoner would scarcely have groped about to find these facts, in order to prove what he might have assumed as obvious.*

Laws of
Profit.

In the same way, when discussing the laws according to which the rate of profit rises or falls,⁽²⁸⁾ he shows how it happened that the American colonies made rapid progress towards wealth and greatness. He attributes their prosperity to their being engaged in agriculture alone, and to their having therefore, their manufactures and commerce and part even of their retail trade, carried on for

* Recent authors assume that Adam Smith was hopelessly wrong in his doctrine of rent: they write as if he had held that rent enters into the price of commodities, just as profit and wages do. Let them ponder this passage. (Book I, chap. xi, Introduction.) "Rent, it is to be observed, therefore, enters into the composition of the price of commodities in a different way from wages and profit. High or low wages and profit, are the *causes* of high or low price; high or low rent is the *effect* of it. It is because high or low wages and profit must be paid, in order to bring a particular commodity to market, that its price is high or low. But it is because its price is high or low that it affords a rent."

This passage appeared in the first edition. I remember that in Hume's correspondence with Adam Smith, there is a letter in which Adam Smith's general doctrine of rent is disputed, and the doctrine of the above passage is maintained.

them by the capital of the mother country. I will not stop to discuss this statement: I quote it only as an example of the constant appeal to facts which, as I think, characterizes the *Wealth of Nations*. Elsewhere, on the same topic of the law of profit, he mentions that poultry in the country is sold at such a price as would not pay the farmer if he applied all his means to rearing them; but that the price is a remunerating one under the actual circumstances, because the poultry live on odds and ends which would otherwise be lost. Such minute attention is strange in a deductive philosopher; and goes far beyond that appeal to facts which is made by cautious thinkers in order to verify or illustrate opinions arrived at deductively. Smith's procedure seems to me that of the inductive philosopher, who "is naturally cautious, patient, and somewhat creeping."

On the subject of wages we find the same appeal to facts. In one place there is a comparison of English and Scottish farm wages, from which it appears that the English wages were at that time half as high again as the Scottish. Then the colonial and the home wages are contrasted, with a view to establish the proposition, that labourers are most prosperous, not in the *richest* country, but in the most *advancing* country. "England is certainly, in the present times (1773), a much richer country than any part of North America. The wages of labour, however, are much higher in North America than in any part of England. In the province of New York, common labourers earn 3s. 6d. currency, equal to 2s. sterling a day; ship carpenters, 10s. 6d.

Laws of
Wages.

currency, with a pint of rum worth 6d. sterling, equal in all to 6s. 6d. sterling; house carpenters and bricklayers, 8s. currency, equal to 4s. 6d. sterling; journeymen tailors, 5s. currency, equal to about 2s. 10d. sterling. These prices are all above the London prices; and wages are said to be as high in the other colonies as in New York." The comparative cost of living is then stated, and the result in real wages is determined. All this too, savours of the cautious and creeping inductive philosopher.

Apparent inconsistency of Buckle.

Mr. Buckle is apparently guilty of inconsistency in his opinion as to Adam Smith's method. Mr. Buckle is above all things, the Apostle of Scepticism. Doubt he regards as the parent of inquiry; and inquiry as the parent of improvement. But a mind that doubts, looks with suspicion at all general propositions; and wherever it is possible, treats those propositions merely as hypotheses, which may serve as clues to guide the inquirer through the maze of facts. The sceptic therefore, is essentially an inductive reasoner.

But Mr. Buckle exalts Adam Smith above all his fellows, when he pronounces the *Wealth of Nations* to be the most important book ever written. Now is it not strange that the *best* of books should have been written in the *worst* of methods? Is it not strange that a pilot should have steered safely into port, through an unknown and intricate channel, though as Mr. Buckle alleges, instead of constantly peering down at the sunken rocks, he satisfied himself with an occasional glance downwards, and fixed his main attention on the compass and the stars?

But Mr. Buckle after all, is consistent with himself: for in his first volume⁽²⁹⁾ he adopts from Mr. Rae the notion that Adam Smith's method was deductive; but defends the method as the right one to apply to Political Economy. He states his agreement with Mr. J. S. Mill in the opinion that "the deductive plan is the only one by which Political Economy can be raised to a science." He instances the theory of rent which he regards as the corner-stone of Political Economy, and which was "got at, not by generalizing economical facts, but by reasoning downwards after the manner of geometers. Indeed, those who oppose the theory of rent, always do so on the ground that it is contradicted by facts; and then, with complete ignorance of the philosophy of method, they infer that therefore the theory is wrong."

Inconsistency explained.

To me this example seems unfortunate. The Theory of Rent, that is of *Differential* Rent, professes to explain how differential rent arises, what are its limits, and why it does not modify the prices of commodities. It deals with things as they are, and professes to explain why they come to be what they are. But if inquirers, groping among facts, find that differential rent does not arise, as according to the theory it ought, or that the limits are not such as the theory requires, they are surely right in saying that the theory is at fault. The explanation, I believe, is that the theory is founded on the supposition that men will first settle on the best land, and will take in the second quality land only when all the best is occupied. No one will dispute the existence of a tendency to do this. But the

Is Buckle right?

objectors say that this tendency is counteracted in most cases, by other and more powerful tendencies. If this be true, the Theory of Rent, proving a tendency only, and not an actuality, really explains nothing that has an existence: and I cannot understand Mr. Buckle's opinion, when he says, "those who oppose the Theory of Rent, always do so on the ground that it is contradicted by facts; and then, with complete ignorance of the philosophy of method, they infer that therefore the theory is wrong."

Conclusion as
to inductive
or deductive.

But whether Mr. Buckle is consistent or the reverse, Adam Smith seems to me to be in the *Wealth of Nations* eminently inductive. By this I do not mean that the whole of his great work consists of the collection of facts and the inferring of empirical laws. What I do mean is that the work is *founded* on multitudes of facts, laboriously collected, and on laws directly and indirectly inferred from these. I agree with Dumont, already quoted, that "having to treat a new topic, with a controversy at every step, he felt it necessary to begin with facts." On this solid foundation is raised, no doubt, a superstructure of science, obtained by inferring other laws from the inductive laws. The question is not whether the work contains both processes, but whether comparing it with other works, induction holds a prominent place. I assert then, that comparing it with the treatises of Ricardo, Senior, John Stuart Mill, facts and induction hold a very prominent place.

I find that the *Division of Labours* is investigated by the consideration of nail-making and pin-making: rent, by observed facts as to kelpshores and fisheries:

profit, by the farmers' rearing of poultry, and the progress of the American plantations: wages, by the rates paid in New York, England, and Scotland: the progress of society, by a wide survey of history.

It is, I think, the fulness and richness of the materials, which make the *Wealth of Nations* so eminently readable and so highly instructive. I have mentioned, in the last paragraph, some facts that are used; but these are only samples of vast stores which open on the reader at every page. It is quite true that the doctrines of Political Economy as we now understand them, are but shadowed out; and that the most careful reader, who had made himself acquainted with every argument, every illustration, every digression, of the *Wealth of Nations*, would pass an indifferent examination on the topics of rent, profit, and wages: probably he would be beaten by a competitor who had mastered the sixty large pages of Turgot's *Reflexions sur la Formation et la Distribution des Richesses*.⁽³⁰⁾ But what a difference between the two treatises! Turgot's is as precise and clear as an English text book on Conic Sections; and to any one but a student, as unreadable: Adam Smith's, not being cut up into sections and propositions, is ill calculated for a text book; but makes up for this deficiency by the inexhaustible outpourings of a mind of amazing storage. It was said by Madame Du Deffand of Montesquieu, that his great work ought to be called, not *L'Esprit des Lois*, but *de l'Esprit sur les Lois*: so we may say of Adam Smith's chef d'œuvre, that it ought to be called, not *Smith's Wealth of Nations*, but *Smith's Wealth upon Nations*.

PART II.

THE strongest partizans of Adam Smith, do not pretend that all the principles of the *Wealth of Nations* were his invention, any more than all the principles of the *Principia* and of the steam-engine were the invention of Newton and of Watt. Newton did not invent the Copernican system; he only placed it on a new basis. Watt was not the first to discover the utility of steam as a mechanical force: he constructed a highly complex machine by which that force could be more profitably applied; he painfully worked out his own thoughts in the oscillating beam, the condensing apparatus, the parallel motion; and he borrowed from water mills the ingenious rotary governor. Yet Newton and Watt were men of the most unquestionable originality. So in Political Economy, Descartes and even the Greeks, had noticed the fecundity of the *Division of Labours*. Munn and Childe had preached the doctrine of free trade; they and others, had attacked the Mercantile System, and had demonstrated the proposition that gold and silver are not the only kinds of wealth. Yet Smith is justly regarded as a thinker and writer of singular originality.

There are thoughtless persons, who expect to find in an original work, no ideas of preceding authors. There are some no doubt, even among fairly educated men, who believe that Newton, or at any rate the ecclesiastic Copernicus, first dis-

covered that this earth is a globe. Great must be the astonishment of such when they find a Latin author before the Cæsars, defending the physical doctrine of Epicurus, against those absurd enough to maintain, that the Romans and Greeks had antipodes who escaped the manifest danger of plunging headforemost into the clouds.

Et simili ratione animalia suppa vagari
 Contendunt, neque posse e terris in loca cœli
 Recidere inferiora magis, quam corpora nostra
 Sponte sua possint in cœli templa volare;
 Illi cum videant solem, nos sidera noctis
 Cernere, et alternis nobiscum tempora cœli
 Dividere, et noctes pariles agitare diebus.

Adam Smith's greatest precursors were the Économistes, as they called themselves; the Physiocrates as for distinction the French now call them. The term Political Economy is older than we thought: it has been traced back to the reign of Louis XIII (1610-43), when Montchrétien, sieur de Vatteville, wrote a treatise, *Traicté d'économie politique*. Montchrétien was a man of ardent mind; and after a visit to England, then the classical land of liberty, he was strongly impressed with the wretchedness of his own countrymen, and in his book vigorously set forth his impressions.

Quesnay, Gournay, and their friends however, when calling themselves Économistes, did not intend that word as an abbreviation of Political Economists: they used it as the abbé Genovesi at Naples had used it in the term civil economy, as Beccaria at Milan in the term public economy.

The name Économistes is certainly ambiguous; and though Physiocrates has a foreign and pedantic air,

it is better, for the sake of clearness, to accept it. It expresses too, the leading character of the school. Thoughtless men pass through life, with a general impression that though there are laws which regulate the movements of the earth and of the stars, the growth and reproduction of plants and animals, there are no laws in the relations of societies and nations, but that all is determined by accident and caprice. Quesnay and his school set about to prove that there is in society, a natural order, a natural constitution, a physiocratie.

The *Économistes* or *Physiocrates* are regarded by the French as divided into two schools; that of Quesnay and that of Gournay. Quesnay, the court physician, living at Versailles, in apartments assigned to him by Madame de Pompadour the King's mistress, was patronized by Louis XV, who is said to have amused himself by drawing off from the press the sheets of Quesnay's book. Court favour and surrounding voluptuousness, do not seem to have corrupted the simplicity and benevolence of the physician.

Gournay, a merchant, and the son of a merchant, living for some years at Cadiz, to which port he was sent at 17 years old, early directed his attention to the science of commerce: to the laws established by nature, according to which commercial values balance each other, (just as bodies fall into a natural arrangement by the force of gravity); to the complex relations of trade and other branches of political economy; to the mutual dependence of commerce and agriculture, and the influence of each on the wealth, the population, and the resources of states.

Quesnay's system was much wider: it embraced theories on philosophy and government as well as on political economy. It has been thus summed up by a French author.⁽³¹⁾

"The world is governed by physical and moral laws which are immutable. It is the part of man, an intelligent and free being, to discover them, and to observe or violate them to his benefit or injury. The aim assigned to his intellectual and physical powers, is the appropriation of matter to supply his wants and ameliorate his destiny. But this task he must perform with due subordination to the just as well as to the useful.

"Man realizes to himself justice and utility, whether individual or social, through the notions of duty and right which his nature reveals to him, and which teach him that it is contrary to his own and the general well being to seek his private advantage at the expense of others. These notions become more developed in the minds of individuals and of nations as enlightenment increases, as civilization advances: they are naturally followed by sentiments of fraternity among men, and by peace among nations.

"The principal manifestations of justice are liberty and property; that is, the right of every one to do whatever does not wound the general interest, and to use as he pleases the property he possesses, provided that he has acquired it in a way conformable to the nature of things and to general utility: since otherwise there would be no civilization, and a far smaller sum of possessions would be within men's reach.

"Liberty and property then, are founded on the nature of man, and are rights so essential that the laws or conventions of men ought only to recognize, confirm, and clearly express them. Governments have nothing to do but to protect these two rights, which, properly understood, include all the material and moral needs of society.

"To say that liberty and property are essential rights, is to say that they accord with the general interest of the species; it is to say that with them, the earth is more fertile, the industry of man in all its manifestations is more productive, and the development of all the aptitudes, moral, intellectual, scientific, and artistic, more sure and more rapid in the direction of the good, the beautiful, the just, and the useful; it is to say that man enjoys to the utmost the fruits of his exertions, and that he escapes being the victim of the arbitrary laws of his equals."

A reader of the *Wealth of Nations* will not find

any skeleton or type of Adam Smith's great book, in the above passage, nor in the following table, by Quesnay, which is characteristic of his love of arithmetical formulæ.⁽³²⁾

"Formule du Tableau Economique.

Reproduction Totale: 5 milliards.

	Avances annuelles de la classe productive.	Revenu pour les pro- priétaires des terres, le Souverain et les déci- mateurs.	Avances de la classe stérile.
	2 milliards	2 milliards	1 milliard
Sommes qui servent à payer le revenu et les intérêts des avances primi- tives.	<div> <div>1 milliard</div> <div>1 milliard</div> <div>1 milliard</div> </div>		1 milliard
			1 milliard
			1 milliard
		Total	2 milliards. dont la moitié est retenue par cette classe pour les avances de l'année suivante.
Dépense des avances annuelles.	2 milliards		
Total	5 milliards		

The inquisitive reader must consult the original, and its oblique dotted lines, if he wishes to understand this Formula. I quote it only as a sample of Quesnay's style of exposition, better suited for a scientific journal than for a treatise intended to be generally read. Nothing could less resemble Adam Smith.

From what I have said of Gournay, it will be seen

that his investigations more nearly approached those of Smith. Had Gournay possessed the necessary learning, leisure, and genius, he might have written in French, *de la richesse des nations*.

Having said this much of the form, let us look at the doctrines.

The most practical, the truest, the most widely spread dogma of the Physiocrats, was *laissez faire, laissez passer*. Gournay was the inventor of it. Himself a merchant, he had seen that manufactures and commerce flourish most under free competition, which develops men's industry and prudence, which lowers the cost of transport and the rate of interest.⁽³³⁾

The doctrine therefore, which we now call that of free trade, was not the invention of Adam Smith. Nor was it first invented by Gournay: for we find it in several previous writers; as for example in Jacob Vanderlint in 1734; and again in Sir Matthew Decker, in 1744. Decker is much referred to in the *Wealth of Nations*: he writes thus:⁽³⁴⁾

"Trade cannot, will not, be forced: let other nations prohibit, by what severity they please, interest will prevail; they may embarrass their own trade, but cannot hurt a nation, whose trade is free, so much as themselves. Spain has prohibited our woollens; but, had a reduction of our taxes brought them to their natural value only, they would be the cheapest in Europe of their goodness, consequently must be more demanded by the Spaniards, be smuggled into their country in spite of their government. . . . But should we prohibit their commodities? By no means; for the dearer they grow, no more than what are just necessary will be used. . . . *Why hurt ourselves to hurt the Spaniards?* . . . Premiums may gain trade, but prohibitions will destroy it."

As to our restraints on French trade, Decker says:

"Would any wise dealer in London, buy goods of a Dutch shop-

keeper for 15d. or 18d. when he could have the same from a French shopkeeper for 1s.? Would he not consider that, by so doing, he would empty his own pockets the sooner, and that, in the end, he would greatly injure his own family by such whims? And shall this nation commit an absurdity that stares every private man in the face? The certain way to be secure is to be more powerful, that is, to extend our trade as far as it is capable of; and, as restraints have proved its ruin, to reject them, and depend on freedom for our security."

We can only say of Gournay then, that he seized and propagated in France, a doctrine which had occurred to other traders before him. Adam Smith must have had his mind especially directed to the doctrine by the Physiocrats, because as I have mentioned, during his stay in Paris, a controversy was raging between them and the protectionists. He had already had his attention called to such questions, first by the teaching of his predecessor, Hutcheson, and afterwards by his membership of Provost Cochrane's Club at Glasgow.

In close connexion with this doctrine is another: that which teaches us that wealth does not consist of gold and silver alone. The Mercantile System laid down that to get gold and silver was the business of national commerce.⁽³⁵⁾

"That wealth consists in money, or in gold and silver, is a popular notion which naturally arises from the double function of money, as the instrument of commerce, and as the measure of value. In consequence of its being the instrument of commerce, when we have money we can more readily obtain whatever else we have occasion for, than by means of any other commodity. The great affair, we always find, is to get money. When that is obtained, there is no difficulty in making any subsequent purchase. In consequence of its being the measure of value, we estimate that of all other commodities by the quantity of money which they will exchange for. We say of a rich man that he is worth a great deal, and of a poor man that he is worth very little money. A frugal man, or a man

eager to be rich, is said to love money; and a careless, a generous, or a profuse man, is said to be indifferent about it. To grow rich is to get money; and wealth and money, in short, are in common language considered as in every respect synonymous.

"A rich country in the same manner as a rich man, is supposed to be a country abounding in money; and to heap up gold and silver in any country is supposed to be the readiest way to enrich it."

Adam Smith, having thus explained what are the received notions on this subject, proceeds to show their falsity. Now that the Physiocrates also saw their falsity, is unquestionable. J. B. Say in a controversy with Dupont de Nemours, while attacking the doctrine that the artisan adds no value to the materials he works up, at the same time frankly admits the truth of the opinions held by the Physiocrates as to gold and silver.⁽³⁶⁾ "I cannot understand how your friends, who have rendered us so great a service in *teaching us that gold and silver are not our only wealth*, but that it is absurd not to allow some value to corn also, were not led by this admirable and just view, to see that it is just the same with every other real and appreciated value."

But did these French thinkers invent this true doctrine? Why we find it in England in the 17th century. Sir Dudley North, in 1691, says:⁽³⁷⁾

"That the whole world as to trade is but as one nation or people, and therein nations are as persons.

"That there can be no trade unprofitable to the public; for if any prove so, men leave it off; and wherever the traders thrive, the public, of which they are a part, thrive also.

"That no laws can set prices in trade, the rates of which must and will make themselves. But when such laws do happen to lay any hold, it is so much impediment to trade, and therefore prejudicial.

"That money is a merchandize, whereof there may be a glut, as well as a scarcity, and that even to an inconvenience.

"That a people cannot want money to serve the ordinary dealing, and more than enough they will not have.

"That no man will be the richer for the making much money, nor have any part of it, but as he buys it for an equivalent price."

This was published in the reign of William and Mary, when in France, Louis XIV had seen his best days.

Under the great grandson of Louis, the Physiocrats propounded the same doctrine; but they cannot be said to have invented it: nor can Adam Smith be said to have been indebted to them for it.

As regards production, and the division of men into the productive and unproductive classes, Adam Smith did not even hold the doctrine of Quesnay. The Frenchman held that farmers alone are productive; partly, as I understand, because they alone produce materials, while manufacturers only alter the form of those materials; partly, because farmers alone produce more than they consume; this excess being the *produit net*. If there be such a thing as this *produit net*, arising from farming operations only, then the farmers who furnish it certainly form a category of their own: they are preëminently wealth producers: their business gives wages to the labourer, profit to the capitalist-farmer, and a *produit net* over and above these; whereas manufactures give wages and a profit only. If then there be a *produit net*, it was competent for Quesnay to call this thing wealth, and its producers the only productive class; that is the only class producing wealth. Whether the nomenclature was a wise one is another question: the fault of it was that it was naturally misunderstood.

Gournay however, the other pillar of the Physiocrates, according to Turgot, did not adopt this nomenclature: he held, as Adam Smith did afterwards, that manufacturers added to national wealth. Turgot says: ⁽³⁸⁾

“Gournay thought that a workman who had made a piece of cloth, had added real wealth to the mass of national wealth.”

Quesnay would reply, that the farmer who produced three quarters of wheat from an acre, added *two* quarters to the national wealth, just as the workman added the piece of cloth: but that the farmer added a *third* quarter of wheat, which constituted a *produit net*. Quesnay would add, that the piece of cloth and the *two* quarters of wheat only replace the wages, and the interest of capital expended: but that the *third* quarter of wheat was a pure gain to the nation, while no such pure gain accrued from the manufacturing operation.

Gournay, I presume, knew little of this *produit net*, as he died in 1759, only a few months after Quesnay had published his *Tableau Économique*.

Everything turns on this question, whether there is such a thing as a *produit net*. Adam Smith saw clearly that there is: that it consists of that part of the rent that a landlord receives, which is not remuneration for capital laid out on permanent improvements. Of a particular rent of £1,000 a year, £600 may be for interest on buildings, roads, drains; leaving £400 a year for the mere use of the soil. This £400 is a *produit net*: it is a payment in addition to what the landlord would have received if he had built a factory at the same expense.

McCulloch indeed, has censured Adam Smith for holding this opinion.⁽³⁹⁾

“His leaning to the system of the Economists—a leaning perceptible in every part of his work—made him so far swerve from his own principles, as to admit that individual advantage is not always a true test of the public advantageousness of different employments. He considered that agriculture, though not the only productive employment, is more productive than any one else. . . . It is clear however, that these distinctions are all fundamentally erroneous. A State being nothing but a collection of individuals, it follows that whatever is most advantageous to them individually must be so also to the collective body; and it is obvious, that the interest of the parties will always prevent them from engaging in manufactures and commerce, unless when they yield as large profits, and are consequently as publicly beneficial as agriculture.”

Whenever I find McCulloch saying that a proposition is clear or obvious, I am on my guard. In this case the propositions are:

1st, that individual interest and national interest are the same.

2nd, that individual interest will guide men to the most profitable employment.

The conclusion is that one application of capital is as advantageous to the community as another.

To me it seems clear and obvious that McCulloch has forgotten the landlord in his system: that he has overlooked the rent which the landlord receives. His argumentation is true of a new country where there is no rent, and where a capitalist gets a high rate of profit in manufactures and in farming. But suppose the land came to be all occupied in that country: the competition for farms would make young men offer a rent for them: the rate of profit would fall, because the tenant would pay his rent out of his gains. Competition would also bring

down the rate of profit in manufactures, and trade generally. After this change, the farmer would continue to produce the same quantity of commodities as before, but these would be divided between himself and his landlord: the manufacturer would produce as many commodities as before, but he would retain fewer for himself as a profit.

The farmer and the landlord together get the old amount of commodities; and the price of these does not fall, but as population increases tends to rise. The manufacturer's commodities are the same in quantity, but their price falls. The world may be none the poorer, but the manufacturing country is poorer, because it has to give a greater quantity of cloth and iron for the sugar, tea, timber it imports. The landlord's rent is a *produit net*.

It has been objected indeed, by Ricardo and his disciples, that even taking "land" in its widest sense, as including water, fisheries, mines, natural forests, it is not the only agent which coöperates with the labour of man. Fermentation for instance, and chemical action generally, coöperate also. Land no doubt, is limited in extent: fermentation and chemical agencies are unlimited. But we are asked whether we regard the limitation of land as advantageous, and as putting it into a higher category than fermentation and chemical action generally: we are reminded triumphantly, that the limitation of the quantity of land is the cause of over population and all the consequent difficulties which beset an old country.

I might reply with an argument of Dr. Chalmers; that it is a mistake to speak of a limitation of land

and therefore of population as a misfortune on the whole. Some persons have imagined that we might multiply our farming produce to any extent, by putting on the land all the excreta of town and country. Suppose this were so; and further, that the additional food could be produced at such cost as to give fair wages and our present rate of profit, to labourers and farmers. Population in that case, might augment indefinitely, without any deterioration of condition. Say that in Great Britain, it might double every 25 years.

It is now about 25 millions.

In 100 years it might become . . 400 „

In 200 years, „ „ . 6,000 „

By this time, England and Scotland, would each of them be one great town: in another century or two, each of these two great towns would be as closely packed as the densest part of London: results eminently undesirable.

Limitation of population then, is absolutely necessary. But a much less fanciful argument remains. The land of all old countries is less than the population requires; the chemical action of the same countries is as extensive as the population requires: which is it most profitable to make use of; the limited or the unlimited agent? There are certain acres in Europe which produce the Lafite claret: it might be for the benefit of the world that all the French vineyards should yield wine as fine as the Lafite: but so long as this is not so, we must reckon these acres a source of wealth to their owners, to the department containing them, and to France. In the same way, those countries which

have fertile agricultural lands find in those lands a source of wealth which they would not find in them if land were unlimited. The proprietors of the Lafite vineyards derive from those acres a large produit net: England from her corn lands and pasture lands derives a produit net which she would not derive from them if the fertile land of Europe were unlimited.

There was a real meaning then, in Quesnay's distinction as to the productive and unproductive classes. In a fully occupied country, the former produces two revenues; one for himself and another for his landlord: he is therefore more productive than the manufacturer or the merchant.

I even think that this distinction is better than that of Adam Smith, who applies the term productive to all whose labour produces saleable commodities. The artisan, the manufacturer, the rural labourer, the farmer, are employed in producing valuable commodities: their labour is productive. The physician is employed in keeping these men in health: the lawyer in defending their rights: the policeman in preventing depredations: without the help of the physician and the lawyer and the policeman, disease and anarchy would reduce production to half its present amount: yet these men are called unproductive. Smith's distinction is arbitrary; but Quesnay's expresses a reality.

It was intended to express a reality: and a very serious inference was drawn from it: no less than this; that all taxation falls ultimately on the produit net, and that therefore, all existing taxes should be

abolished, and the whole revenue of the government should be raised by one tax, a land-tax. This peculiarity of the school was one which Napoleon naturally seized on. While he was First Consul, talking with Morellet, he said: ⁽⁴⁰⁾

“You are an *Économiste*, I think. You want a single tax. You also want a free corn-trade. Morellet replied, that he was not a very pure economist; that he held the doctrine with modifications. Morellet in fact, had early struggled for freedom of labour and freedom of trade; but he does not seem to have shared the enthusiasm of some authors for the master’s agricultural system.”

Suppose now, we in England were to abolish all our present taxes, and substitute a land-tax, graduated according to the *produit net*, that is the rent, or rather such part of the rent as is not interest on farm buildings and other outlay of capital. The amount of our present taxes is more than twice the *produit net*. It is necessary for the economists to show that when other taxes were removed, there would be such an increase in the *produit net* that it would rise to two or three times its present amount.

Dr. Chalmers held in this respect the doctrine of Quesnay. ⁽⁴¹⁾

“With the exception of their first brief and temporary effect on wages and the profits of circulating capital, and of their more prolonged effect on the profits of fixed capital—all *taxes* fall upon land; the interest of its mortgages being included.”

I need hardly say that Adam Smith gave no countenance to these unproved and wild notions, which were abhorrent to his sober and sagacious mind. His four maxims are well known. ⁽⁴²⁾

“I. The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to

their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state. . . .

"II. The tax which every individual is bound to pay ought to be certain, and not arbitrary.

"III. Every tax ought to be levied at the time, or in the manner in which it is most likely to be convenient for the contributor to pay it.

"IV. Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people, as little as possible over and above what it brings into the public treasury of the state." . .

Compare these maxims with Quesnay's proposal to abolish existing taxes and to impose a single one in their place. Smith contends that nations have tried to do the very things he advises.

"The evident justice and utility of the foregoing maxims have recommended them more or less to the attention of all nations. All nations have endeavoured, to the best of their judgment, to render their taxes as equal as they could contrive; as certain, as convenient to the contributor, both in the time and in the mode of payment, and, in proportion to the revenue which they brought to the prince, as little burdensome to the people."

The Physiocrats then, wished to abolish the actual taxes, and to establish a land-tax in their stead: Adam Smith, on the contrary, contended that the actual taxes were founded on right principles, and that the desideratum was to adapt them more exactly to those principles.

In another, and a very important respect, Smith failed to adopt the French opinion; and this is much to be regretted. His notions on rent form the least satisfactory part of his great work: they are fluctuating and inconsistent. In one place he speaks of the landlords as men who love to reap where they have not sown; which may be true enough literally, but which leaves the impression that he

regarded rent as an arbitrary exaction. Elsewhere, he speaks of rent as entering into price; which means, I suppose, that a rise of rent causes a rise of price: whereas as we now believe, and as he says elsewhere, it is the rise of price in raw produce which causes an increase of rent.

It is not pretended that the Physiocrates had discovered the modern doctrine of rent. But this doctrine follows from the Malthusian doctrine of population: for if food increased as fast as population, there would be no tendency to a constant augmentation of rent as society advanced in numbers.

But in the matter of population, the Physiocrates in some degree anticipated Malthus. Mirabeau the elder, a warm partizan of Quesnay, had at first, in his *l'Ami des Hommes*, contended for the popular notion, that an increase of population causes an increase of wealth; but he had subsequently yielded to the reasoning of the school, and had adopted its opinion that wealth comes first and population afterwards. Quesnay himself says: ⁽⁴³⁾

“We could not take away anything from this distribution of expenses to the disadvantage of agriculture, nor take away anything from the returns of the cultivator, by exaction or by hindrances to commerce, without causing a failure in the annual reproduction of the national wealth, *and a diminution of population* easily proved by calculation.”

Adam Smith adopted no such doctrine as this: would that he had!

There is one expression of Adam Smith's, which has been commented on unfavourably: I mean the “land and labour” of the nation. Now Smith begins his book with saying that:

"The annual labour of every nation is the fund which originally supplies it with all the necessities and conveniences of life which it annually consumes, and which consist always either in the immediate produce of that labour, or in what is purchased with that produce from other nations."

Elsewhere, using the phrase "land and labour," he gives us to understand, that though labour is that which originally supplies the commodities we consume, yet the possession of fertile land adds to the revenue of the nation. The believer in a product net must of course hold this doctrine.

I had therefore believed that the expression "land and labour" was borrowed from the Physiocrates. But this is not so. We all know the references in the *Wealth of Nations* to John Smith's *Memoirs of Wool*. This book appeared in 1747, long before the Physiocrates flourished: I find in it the following passage, with the marginal note, "What every person pays annually to LAND AND LABOUR."⁽⁴⁴⁾

"For my Part, therefore, I consider every Person in the Kingdom, for what he eats and drinks, and wears, as a Tenant to the Lands, and a Paymaster of our Labourers; and if seven millions of People consume the Yearly Value of 42 millions of our Native Product and Manufacture, as was said above, every one at a Medium, pays the Yearly Sum of six Pounds, to the LAND AND LABOUR of this Kingdom; every one is a Market of such Value to his Country."

The phrase Land and Labour then, came from an English source, and not from the Physiocrates.

On the whole, I should pronounce that Adam Smith cannot be called a disciple of the Physiocrates. No doubt, he derived this advantage from his intercourse with them: that living among them in Paris when their doctrines had become the subject of warm controversy, he became interested in the great questions at issue; and was thus led to that

retirement from the world during ten years of his mature life, which resulted in his great work. Quesnay and his friends gave the impulse: Smith's early lessons from Hutcheson, his extensive reading, his sustained reflection, gave the direction and the substance.

Lest I should be suspected of national partiality, I will refer to the most distinguished French Political Economist of the present century: J. B. Say. He claimed to be as an author, descended from Adam Smith, and not from Quesnay. Dupont de Nemours, the distinguished apostle of the Physiocrats, protested against this genealogy, and declared that if Say was Adam Smith's son, at any rate he was Quesnay's grandson.⁽⁴⁵⁾

"You share nearly all our principles; and if we except what concerns the public revenue, you infer exactly the same practical consequences. Your whim of denying us, and which, my dear Say, you do not sufficiently conceal, does not prevent your being by the branch of Smith, a grandson of Quesnay and a nephew of the great Turgot."

Say spoke slightly of the Physiocrats, and even of Turgot, regarded as a Political Economist.

"You never speak of the *Économistes* without giving them the odious name of sect, which supposes a mixture of stupidity, folly, and obstinacy. This insult is harmless from a Grimm; but the words of a Say have a greater weight. . . . You assign to these authors, your predecessors, only the merit of good citizens. . . . Slight merit for philosophers of whom each has discovered some truth, of whom not one has been a fool, of whom some have been statesmen, and even sovereigns, very enlightened and even beneficent notwithstanding their crown.

"You have treated Turgot with coldness and levity (except at the end of your second volume), as if great powers did not owe respect to great powers. . . .

"You have named me once, and with the fine epithet, the *estimable*

Dupont de Nemours, but only to censure a thought which you incorrectly attribute to me, and which was really Quesnay's, and which I would defend on a fitting occasion.

"All this has not put me out of temper. All is covered by your admirable developments of the different modes of employing wealth, and by the more than admirable chapter on consumption and private administration, in which you exhibit the reason of Aristotle, the wit of Socrates, the ingenious graces of Franklin. I am going to set my grandchildren to copy it."

We see from these extracts what was said by J. B. Say; a Frenchman, familiar with the writings of the Physiocrats, and enjoying their friendship. We cannot attribute his depreciation of them to national prejudice; nor can we suppose that he rushed into eulogiums on Adam Smith out of spite and hatred towards his countrymen.

We may therefore safely believe with J. B. Say, that Adam Smith was a truly original genius, and not a mere follower of Quesnay and Turgot: we may assert with Dumont, that Adam Smith was the true founder of the science: we may believe with the writers of the French *Dictionnaire*, that Adam Smith's is the greatest name in Political Economy.*

* See page 290 of this Essay.

EVENTS AND DATES.

YEAR. AGE.

- 1723 — Born June 5th, at Kirkcaldy, a village on the north coast of the Firth of Forth, opposite to Edinburgh. Was born several months after his father's death.
- 1726 3 Was carried off by gypsies.
- — Was sent to Kirkcaldy grammar-school, and lived at home in the village till he was about 14. Was of a delicate constitution, and far more addicted to books than to sports. Was remarkable for generosity, absence of mind, and powerful memory.
- 1737 14 Went to Glasgow University; where he heard Hutcheson's lectures.
- 1740 17 Sent to Balliol College, Oxford, as an Exhibitioner on Snell's foundation. Remained there seven years. Principally applied himself to *literæ humaniores*, and moral and political science. Was reprimanded for reading David Hume's *Treatise of Human Nature*.
- 1747 24 Returned to Kirkcaldy, and lived with his mother nearly two years.
- 1748 25 From close of 1748 to 1750, was much in Edinburgh: where he gave during each of two years a course of lectures on rhetoric, &c. Either now, or a year later, commenced his friendship with David Hume.
- 1751 28 Was elected Professor of Logic at Glasgow.
- 1752 29 Was elected to the chair of Moral Philosophy formerly filled by Hutcheson.
- 1755 32 First publication: an anonymous article on Johnson's *Dictionary*.
- 1759 36 Published *Theory of Moral Sentiments*.
- 1762 39 Glasgow University conferred Hon. LL.D.

YEAR.	AGE.	
1764	41	Visited the Continent, as tutor to the young Duke of Buccleuch. Resided 18 months at Toulouse, lately the scene of the Calas Tragedy.
1765	42	Resigned Professorship at Glasgow.
1765-6	43	Resided 9 months at Paris, with his pupil; in the society of Quesnay, Turgot, Condorcet, Dupont de Nemours, &c. At this time a controversy raged between the Physiocrats on one side, supported by the sympathy of Louis XV., Quesnay's patient; and on the other side, all the partisans of the protectionist creed.
1766	43	Returned to London.
1766 to 1776	{ 43 to 53 }	Lived at Kirkcaldy with his mother, busy with his great work, the <i>Wealth of Nations</i> .
1771	48	Began to <i>write</i> the <i>Wealth of Nations</i> .
1776	53	Published the <i>Wealth of Nations</i> .
1777-8	54-5	Was principally in London.
1778	55	Was made Commissioner of Customs for Scotland, and therefore took his mother, and his cousin, Miss Douglas, to live in Edinburgh. Remained there the rest of his life.
1784	61	Lost his mother.
1787	64	Elected Lord Rector of Glasgow University.
1790	67	Died in Italy.

NOTES.

- (1) Mackintosh, quoted by M'Culloch; vii., note.
- (2) *Ib.*, Ethical Dissertations, 385.
- (3) Rae, *New Principles*, Preface iii.
- (4) Alex. Carlyle's *Autobiography*, 2nd ed., p. 73.
- (5) M'Culloch, *Life of Smith*, vi.
- (6) Michel Chevalier, *Cours d'Économie Politique*, 1855, i., 143.
- (7) Professor Millar, quoted by M'Culloch; *Life of Smith*, iv.
- (8) Alex. Carlyle's *Autob.*, 2nd ed., p. 281.
- (9) Disraeli, *Curiosities of Literature*, vol. iii., p. 441.
- (10) Stanhope's Pitt, iv., 403.
- (11) *Ib.*, ii., 141.
- (12) Young's *Agricultural Annals*, vol. xvii., 369.
- (13) *Ib.*, vol. i., 380, note.
- (14) A. Carlyle's *Autob.*, 2nd ed., 278, 279. Dugald Stewart in M'Culloch, xi.
- (15) *Ib.*, 283.
- (16) Dugald Stewart in M'Culloch, xi., and Alex. Carlyle, 279 and 488.
- (17) Boswell's Johnson, ed. 1793, iii., 271, anno 1780.
- (18) *Ib.*, iii., 120, anno 1778.
- (19) Croker's Boswell, quoted in *Westminster Review*, Oct., 1831, p. 393.
- (20) Buckle, ii., 432.
- (21) *Ib.*, i., 194.
- (22) *Ib.*, ii., 443.
- (23) *Ib.*, ii., 418.
- (24) *Ib.*, ii., 419.
- (25) Whateley's *Logic*, Book iv., c. I.
- (26) I use the word Labours in the plural, advisedly.
- (27) *Wealth of Nations*, b. i., c. 2.
- (28) *Ib.*, b. ii., c. 5.
- (29) Buckle, i., 228, note 20.
- (30) Turgot: Guillaumin, 1844, i., pp. 1 to 67.
- (31) *Dict. de l'Écon. Pol.*, ii., 362.
- (32) Quesnay, ed. 1846, 1st Part, 65.
- (33) *Dict. de l'Écon. Pol.*, ii., 360.
- (34) M'Culloch's Adam Smith, 1839, xxxiv.

- (35) A. Smith, b. iv., chap. I.
- (36) Dup. de Nemours, ed. 1846, 1st Part, 417.
- (37) M'Culloch's A. Smith, 1839, xxix.
- (38) Dict. de l'Écon. Pol., 360.
- (39) M'Culloch's A. Smith, 1839, xliv.
- (40) Dict. de l'Écon. Pol., ii., 362 and 364.
- (41) Chalmers 2nd ed., 561.
- (42) A. Smith, b. v., chap. II.
- (43) Dict. de l'Écon. Pol., ii., 189.
- (44) Quesnay, 1846, 69.
- (45) Memoirs of Wool, ii., 112.
- (46) The Physiocrates, ed. 1846, 1st Part, 395, 396, 417, 420, 422.

THE END.

